TA-AV581

SERVICE MANUAL

AEP Model
E Model
Australian Model

- This set is the amplifier section in SEN-T581.

Manufactured under license from Dolby Laboratories Licensing Corporation.
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SPECIFICATIONS

Amplifier section

European models:
(FRONT)
DIN power output
100 W + 100 W (at rear/center/woofer off at 1 kHz, 8 Ω)
Continuous RMS power output
120 W + 120 W (at rear/center/woofer off at 1 kHz, 10% T.H.D., 8 Ω)
80 W/ch (at SURROUND ON at 1 kHz, 10% T.H.D., 8 Ω)

(REAR) 50 W (at front/center/woofer off at 1 kHz, 8 Ω)

(CENTER) 50 W (at front/rear/woofer off at 1 kHz, 8 Ω)

(WOOFER) 80 W (at front/rear/center off at 40 Hz, 4 Ω)

Other models:
Peak music power output
1900 W (total)
(FRONT)
Continuous RMS power output
100 W + 100 W (at rear/center/woofer off at 1 kHz, 10% T.H.D., 8 Ω)

(REAR) 50 W (at front/center/woofer off at 1 kHz, 8 Ω)

(CENTER) 50 W (at front/rear/woofer off at 1 kHz, 8Ω)

(WOOFER) 80 W (at front/rear/center off at 40 Hz, 4 Ω)

Inputs
PHONO (phono jacks):
sensitivity 2.5 mV,
impedance 50 kΩ
CD (phono jacks):
sensitivity 400 mV,
impedance 50 kΩ
TUNER, TAPE, VIDEO1,2 (phono jacks):
sensitivity 250 mV,
impedance 50 kΩ

Outputs
TAPE REC OUT, VIDEO 1 (phono jacks):
voltage 250 mV,
impedance 1 kΩ
PHONES (stereo phone jack):
accepts low and high impedance headphones
TONE ± 10dB at 100 Hz and 10 kHz

General

Power requirements
European, Australian and Singaporean models:
230 V AC, 50/60 Hz
Other models: 110-120 V AC or
220-240 V AC, 50/60 Hz
(adjustable with the voltage selector)
Power consumption
180 W
AC outlets 3 switched, total 100 W max.
Dimensions (w/h/d)
Approx. 430 × 160 × 355 mm
Mass Approx. 8.5 kg
Supplied accessories
Remote RM-U581 (1)
Sony SUM-3 (NS) batteries (2)

Design and specifications are subject to change without notice.

INTEGRATED AV AMPLIFIER

MICROFILM

SONY®

SECTION 1
TEST MODE

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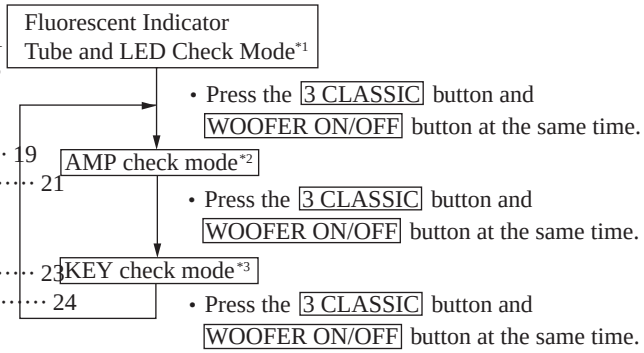
[Fluorescent Indicator Tube, LED All Lit, and Key Check Mode]

1. When the plug is inserted into the outlet while pressing the 3 CLASSIC button, the fluorescent indicator tube and LED will light up completely.
2. The mode changes as follows each time the 3 CLASSIC button and WOOFER ON/OFF button are pressed together after 1.

Sequence of Service Modes


Fluorescent Indicator Tube and LED Check Mode*1
• Press the 3 CLASSIC button and WOOFER ON/OFF button at the same time.
AMP check mode*2
• Press the 3 CLASSIC button and WOOFER ON/OFF button at the same time.
KEY check mode*3
• Press the 3 CLASSIC button and WOOFER ON/OFF button at the same time.

*1 For checking if the fluorescent indicator tube and LED are lit completely

*2 When the AMP check mode is set, “AMP” is displayed on the fluorescent indicator tube. As this mode is not used for servicing, perform step 2 to enter the KEY check mode.

*3 When the KEY check mode is set, “KEY 0”is displayed on the fluorescent indicator tube. Each press of the button is counted. (This excludes the | / ⏻ button)
When all buttons are pressed, the AMP check mode is set.
Buttons pressed once will not be counted when pressed again.

3. To exit the test mode, press the | / ⏻ button

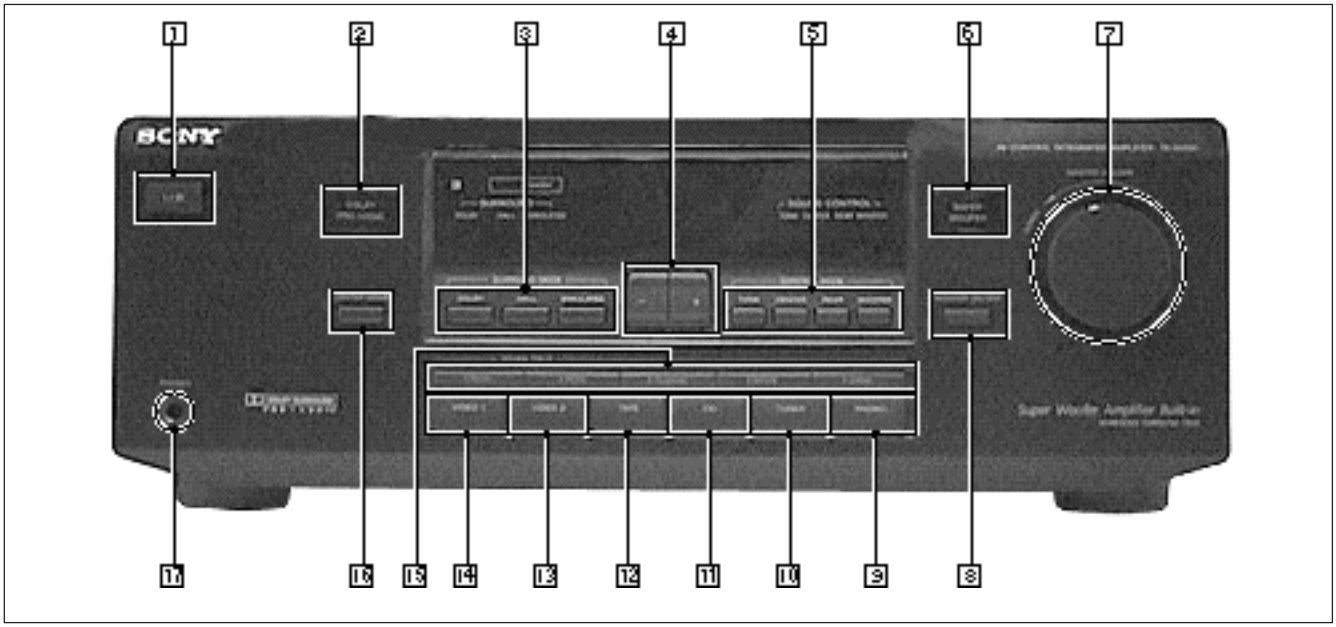
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 2
GENERAL

LOCATION AND FUNCTION OF CONTROLS

[FRONT PANEL]



1 POWER switch (I/⏻)
2 DOLBY PRO LOGIC indicator
3 SURROUND MODE buttons
4 +, – buttons
5 CONTROL MODE buttons
6 SUPER WOOFER indicator
7 MASTER VOLUME control
8 WOOFER ON/OFF button
9 PHONO button
10 TUNER button
11 CD button
12 TAPE button
13 VIDEO 2 button
14 VIDEO 1 button
15 SOUND FIELD buttons
16 CENTER MODE button
17 PHONES jack

[REAR PANEL]

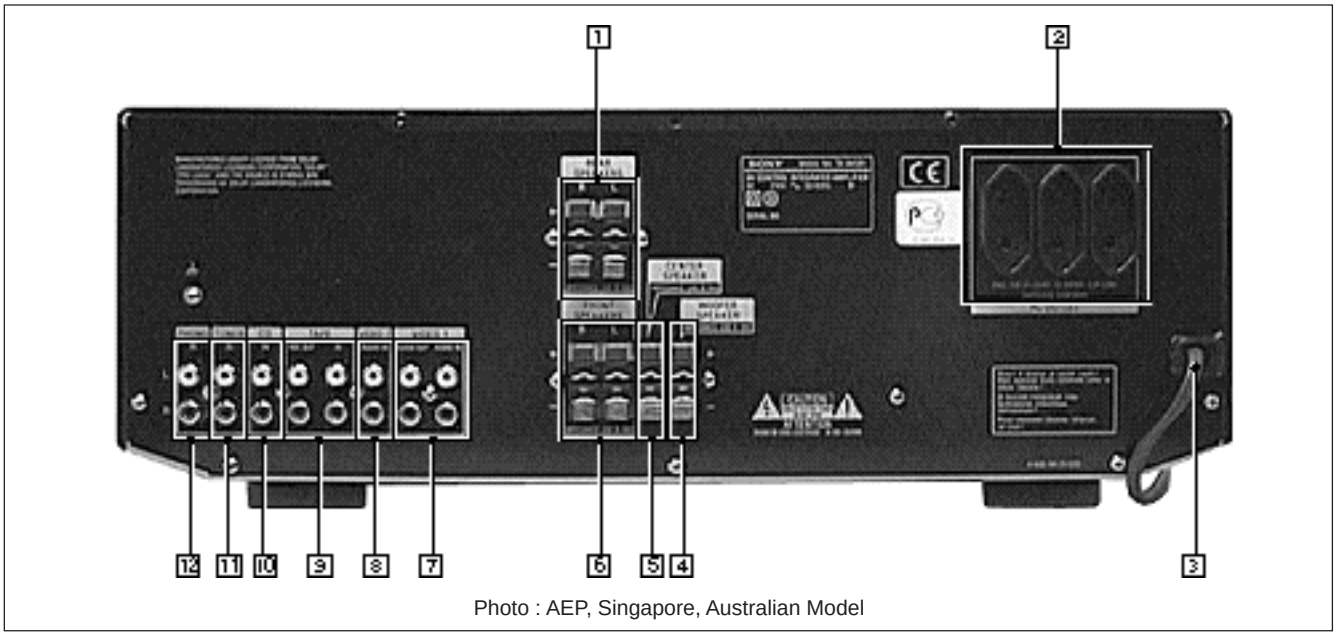
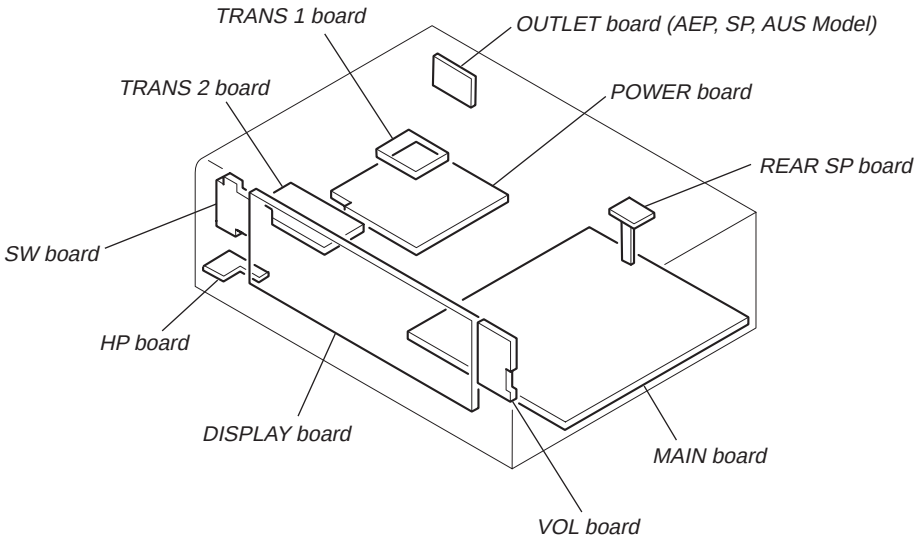


Photo : AEP, Singapore, Australian Model

1 REAR SPEAKERS
2 AC OUTLET
(AEP, Singapore, Australian Model)
3 AC power cord
4 WOOFER SPEAKER
5 CENTER SPEAKER
6 FRONT SPEAKERS
7 VIDEO 1
8 VIDEO 2
9 TAPE
10 CD
11 TUNER
12 PHONO

SECTION 3
DIAGRAMS

3-1. CIRCUIT BOARDS LOCATION



THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this necessary note is printed in each block.)

For Schematic Diagrams.
Note:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- % : indicates tolerance.
- △ : internal component.
- : nonflammable resistor.
- : fusible resistor.
- : panel designation.

Note : The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

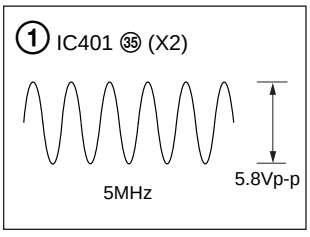
- B+ : B+ Line.
- B− : B– Line.
- : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  No mark : FM
- Voltages are taken with a VOM (Input impedance 10MΩ).
  Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM
- Abbreviation
  AUS : Australian model.
  SP : Singapore model.

For Printed Wiring Boards.
Note:

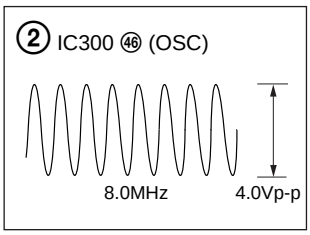
- ○——— : parts extracted from the component side.
- ○ : Through hole.
- △ : internal component.
- : Pattern from the side which enables seeing.

• Waveform

• DISPLAY SECTION



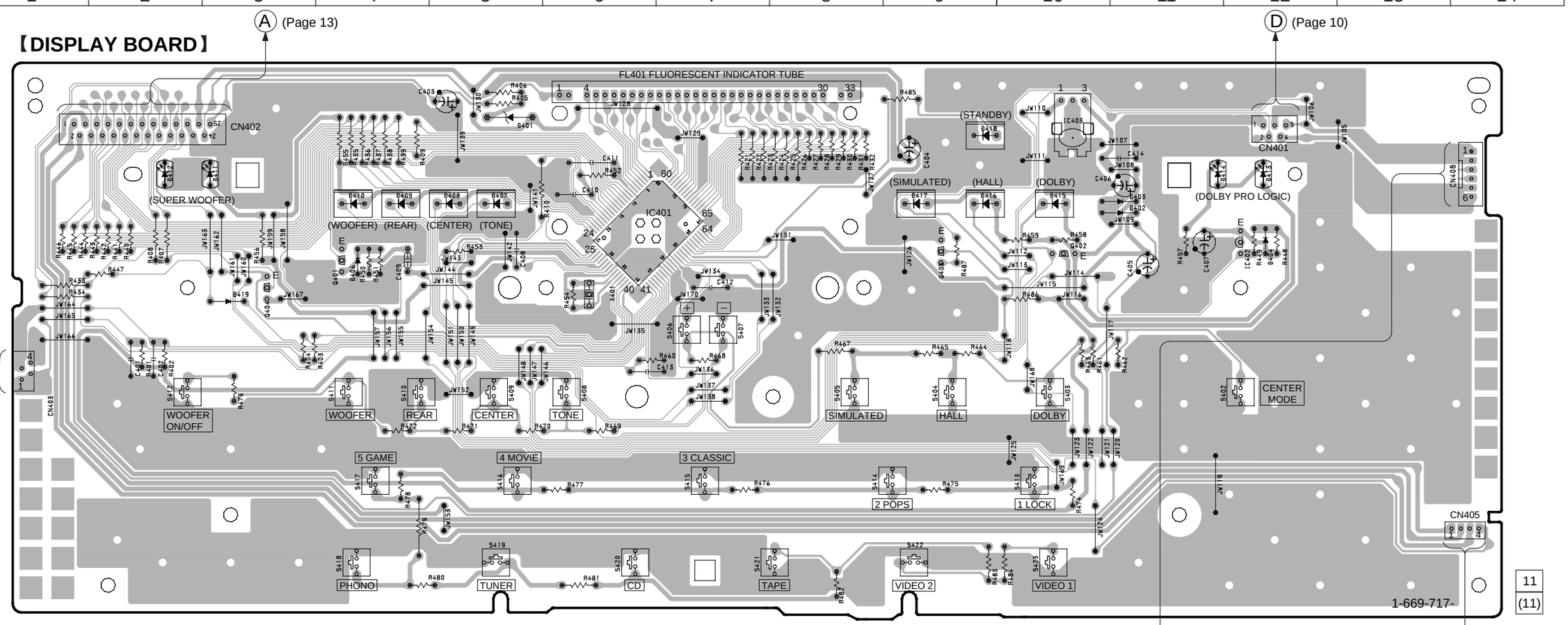
• MAIN SECTION



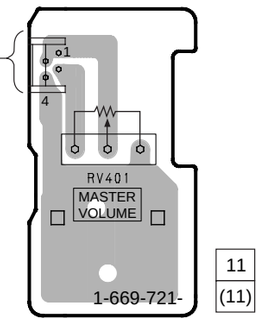
3-2. PRINTED WIRING BOARDS — DISPLAY SECTION —

• See page 4 for Circuit Boards Location.

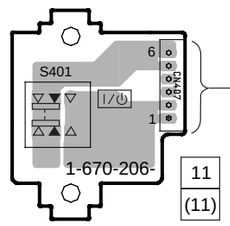
【DISPLAY BOARD】



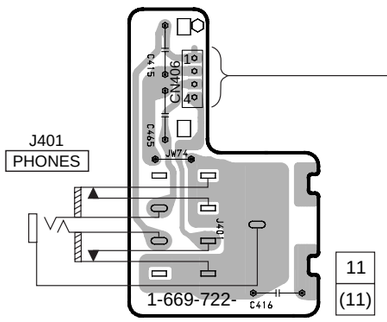
【VOL BOARD】



【SW BOARD】



【HP BOARD】



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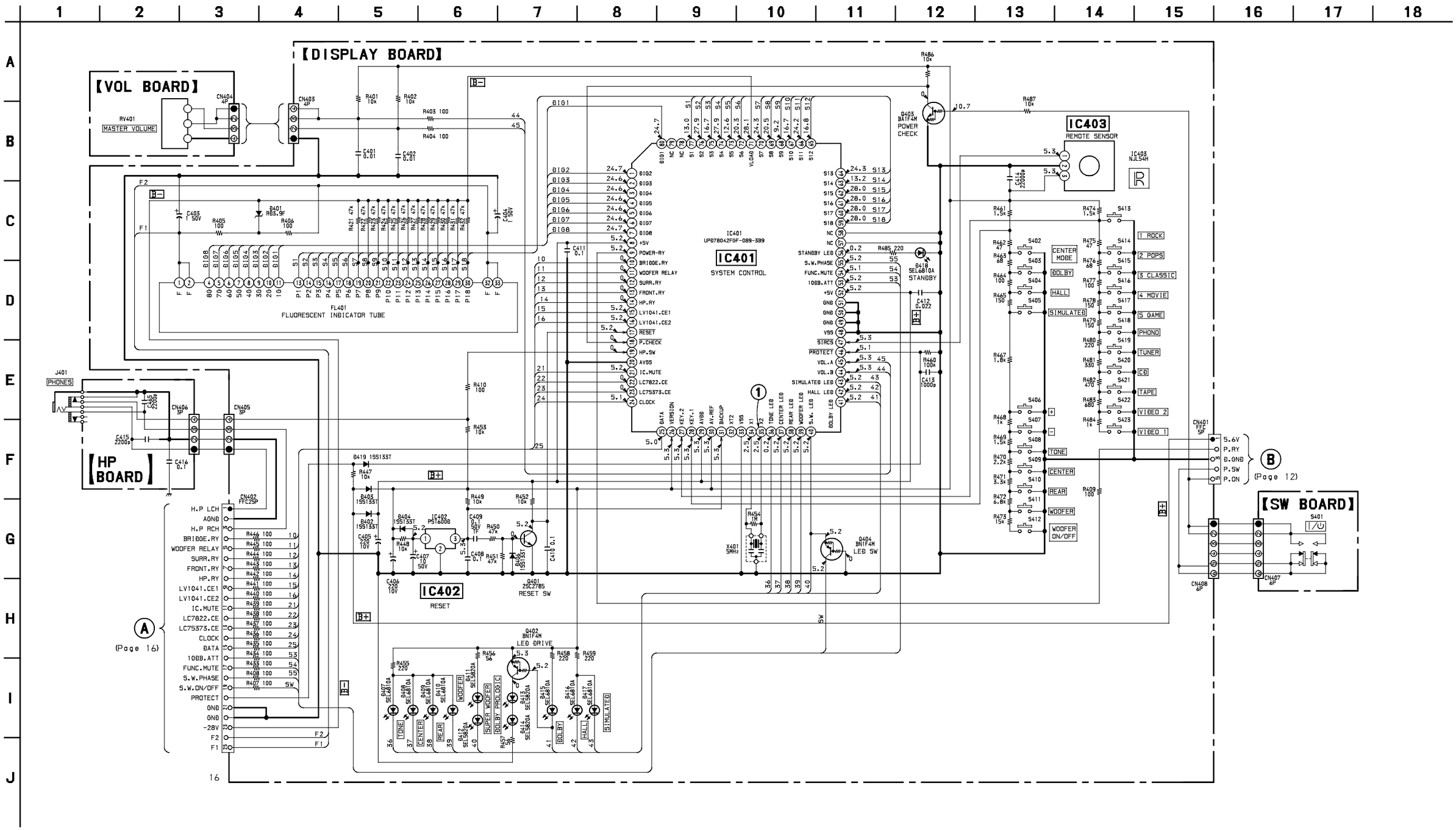
• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D401	B-5	D416	B-9
D402	B-11	D417	B-9
D403	B-11	D418	B-9
D404	C-12	D419	C-3
D406	C-4		
D407	B-5	IC401	C-6
D408	B-5	IC402	C-12
D409	B-4	IC403	B-10
D410	B-4		
D411	B-3	Q401	C-4
D412	B-2	Q402	C-10
D413	B-12	Q403	C-9
D414	B-11	Q404	C-3
D415	B-10		

3-3. SCHEMATIC DIAGRAM — DISPLAY SECTION—

• See page 4 for Waveform. • See page 19 for IC Pin Function Description.

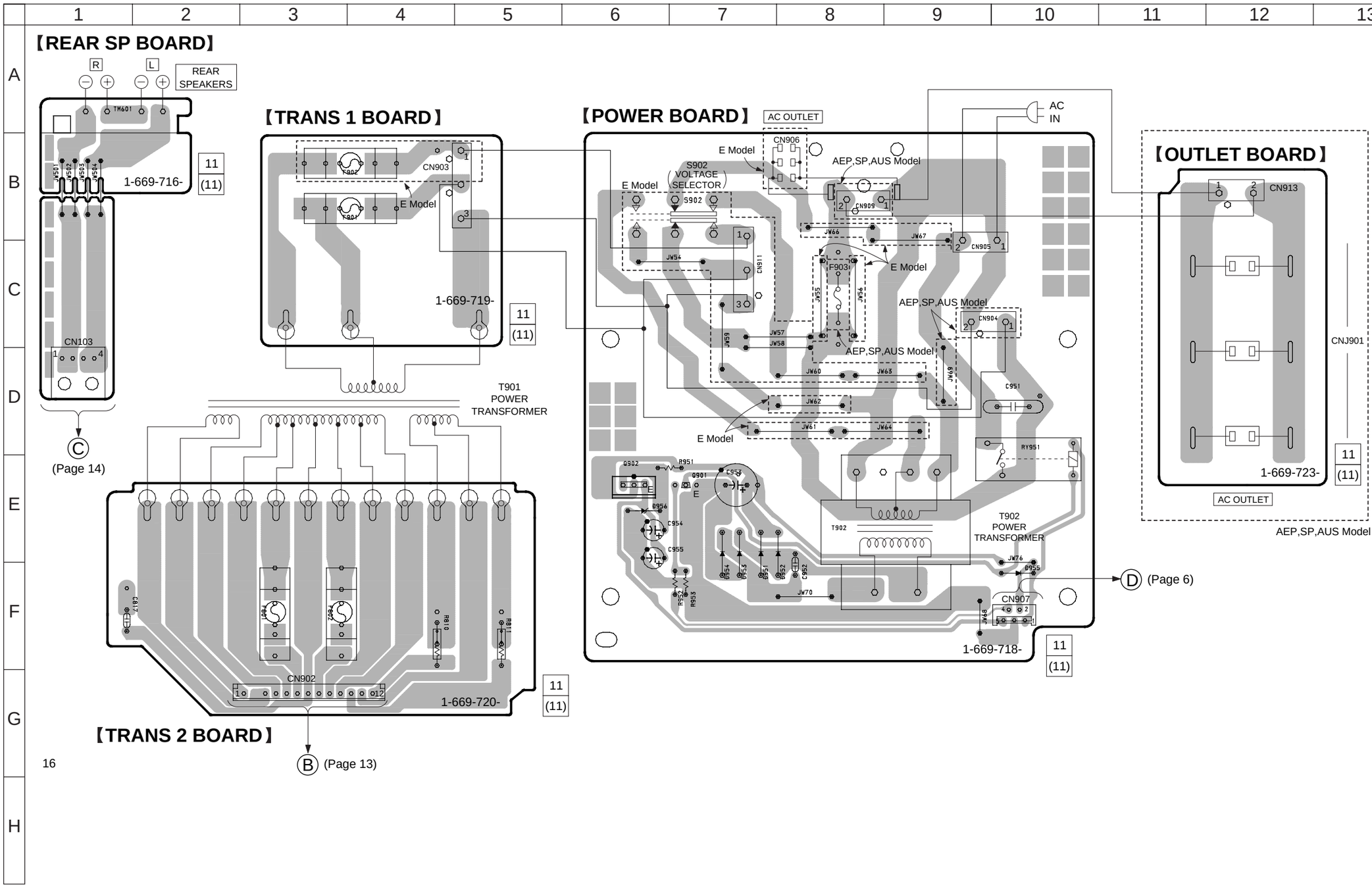


3-4. PRINTED WIRING BOARDS — POWER SECTION —

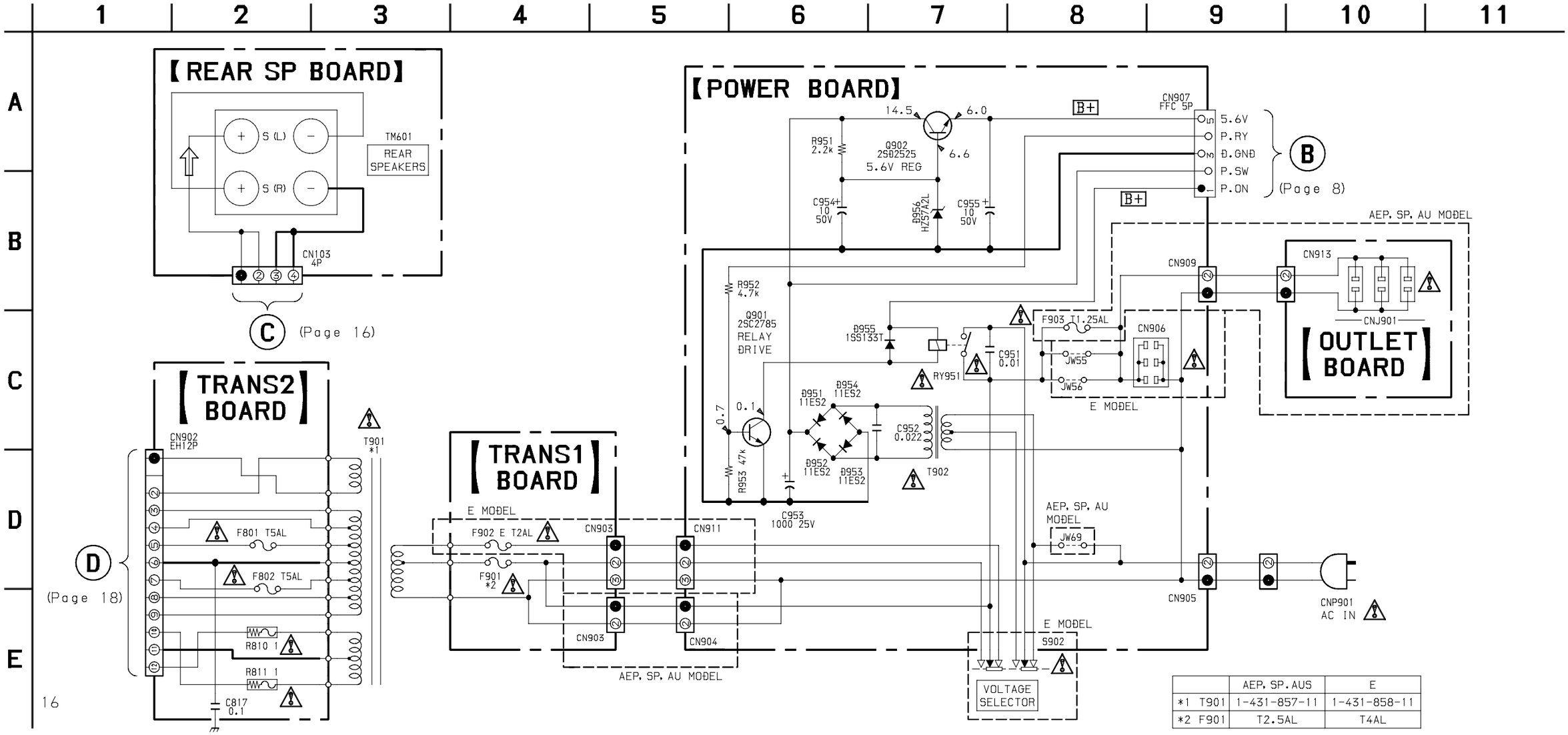
• See page 4 for Circuit Boards Location.

• **Semiconductor Location**

Ref. No.	Location
D951	F-8
D952	F-8
D953	F-7
D954	F-7
D955	F-10
D956	E-6
Q901	E-7
Q902	E-6



3-5. SCHEMATIC DIAGRAM — POWER SECTION—



	AEP, SP, AUS	E
*1 T901	1-431-857-11	1-431-858-11
*2 F901	T2.5AL	T4AL

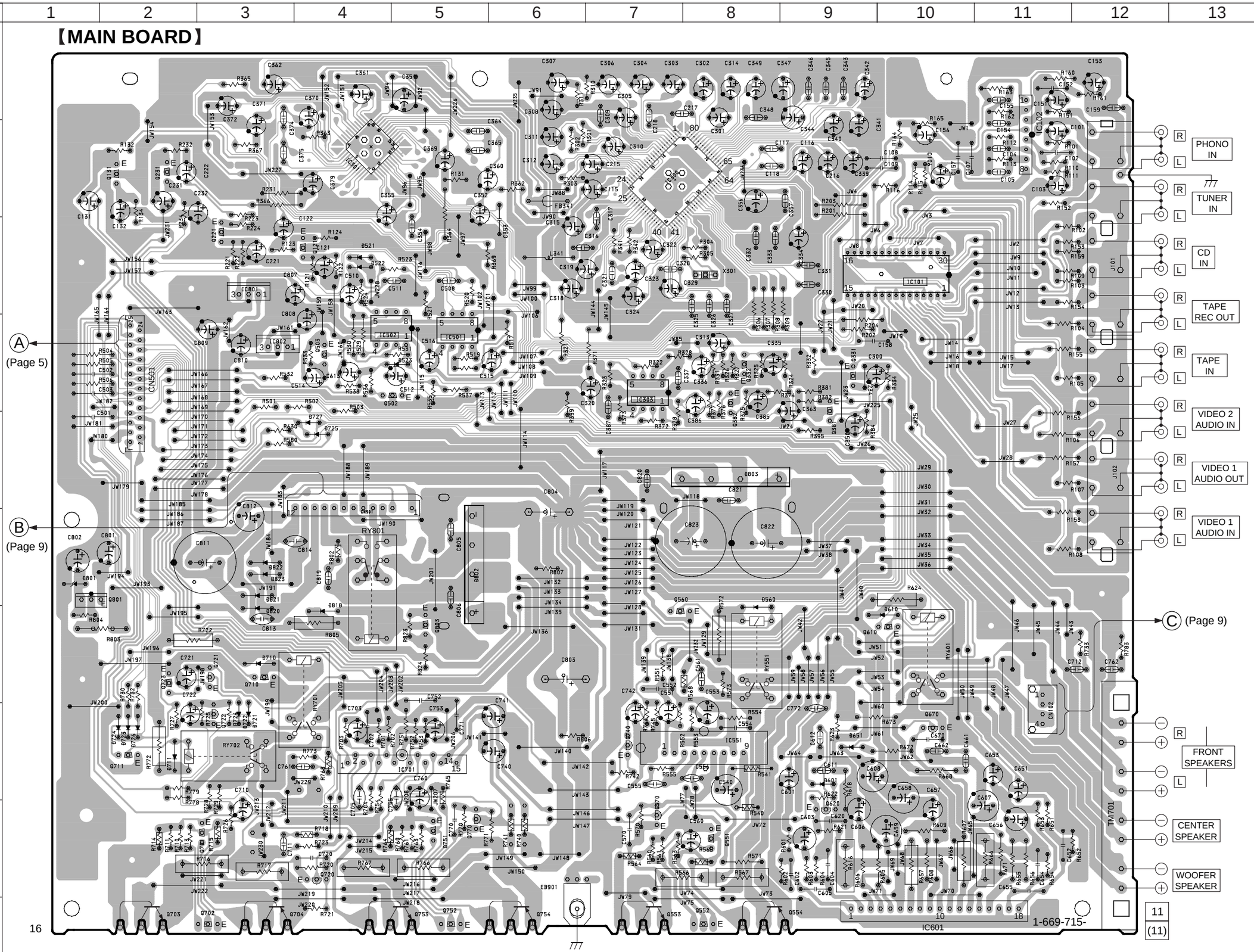
3-6. PRINTED WIRING BOARD — MAIN SECTION —

• See page 4 for Circuit Boards Location.

• **Semiconductor Location**

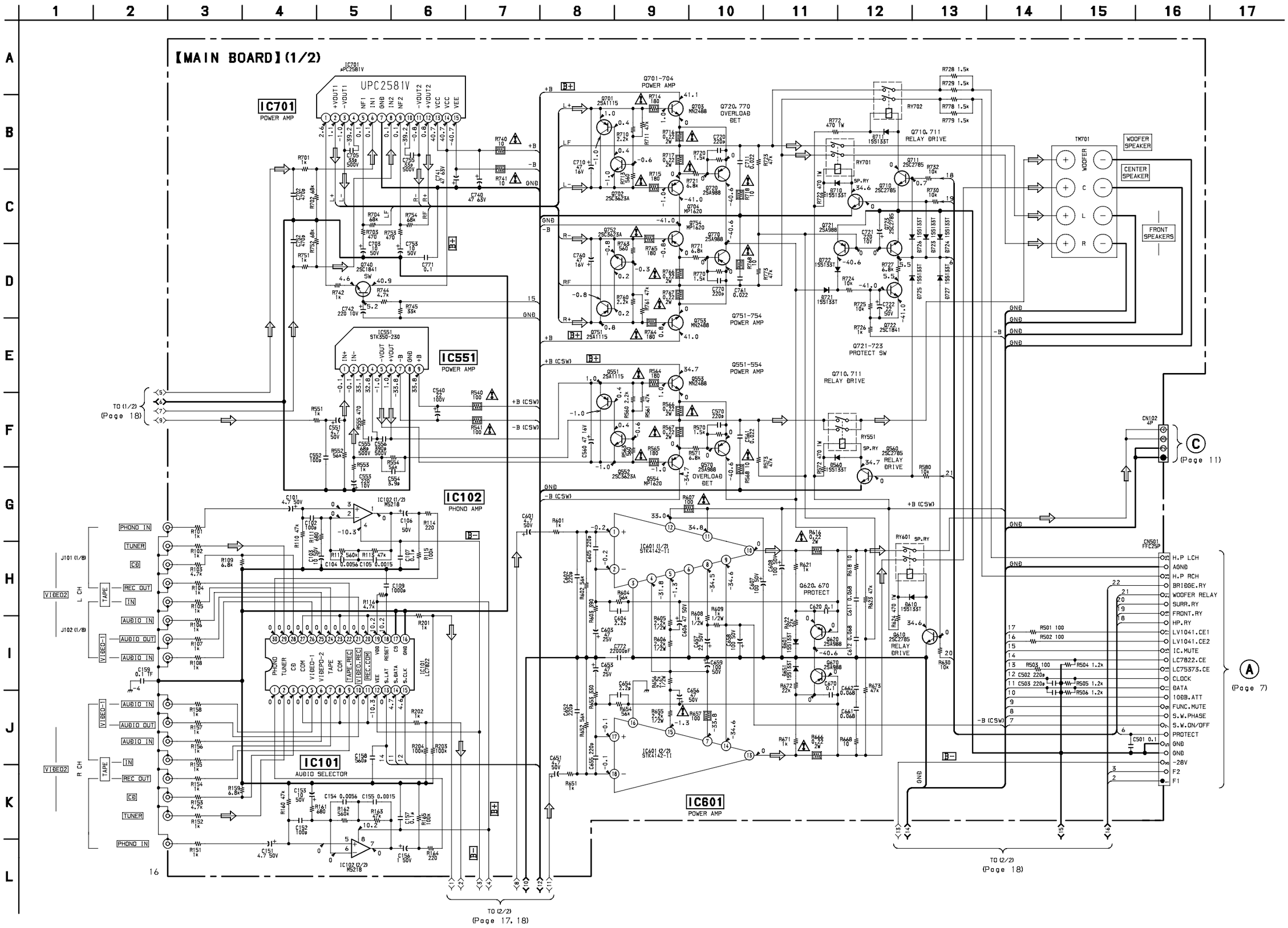
Ref. No.	Location
D521	C-4
D522	C-4
D523	D-5
D560	G-8
D601	H-9
D610	G-10
D651	H-9
D710	G-3
D711	H-2
D721	H-3
D722	H-3
D723	H-2
D724	H-2
D725	E-4
D726	H-2
D727	E-4
D801	F-1
D802	F-5
D803	E-8
D818	G-4
D820	G-3
D821	F-3
D822	F-3
D823	F-3
IC101	C-10
IC102	B-11
IC300	B-7
IC301	B-4
IC303	D-7
IC501	D-5
IC502	D-4
IC551	H-8
IC601	J-10
IC701	H-5
IC801	C-3
IC802	D-3
Q121	C-4
Q131	B-2
Q221	C-3
Q231	B-2
Q331	D-9
Q332	D-8
Q381	E-9
Q382	E-8
Q502	D-4
Q503	D-4
Q551	I-8
Q552	J-8
Q553	J-7
Q554	J-8
Q560	G-7
Q570	I-7
Q610	G-10
Q620	I-9
Q670	H-10
Q701	I-2
Q702	J-3
Q703	J-2
Q704	J-3
Q710	G-3
Q711	H-2
Q720	I-4
Q721	G-3
Q722	H-3
Q723	G-2
Q740	H-7
Q751	I-5
Q752	J-5
Q753	J-5
Q754	J-6
Q770	I-5
Q801	F-1
Q803	G-5

【MAIN BOARD】



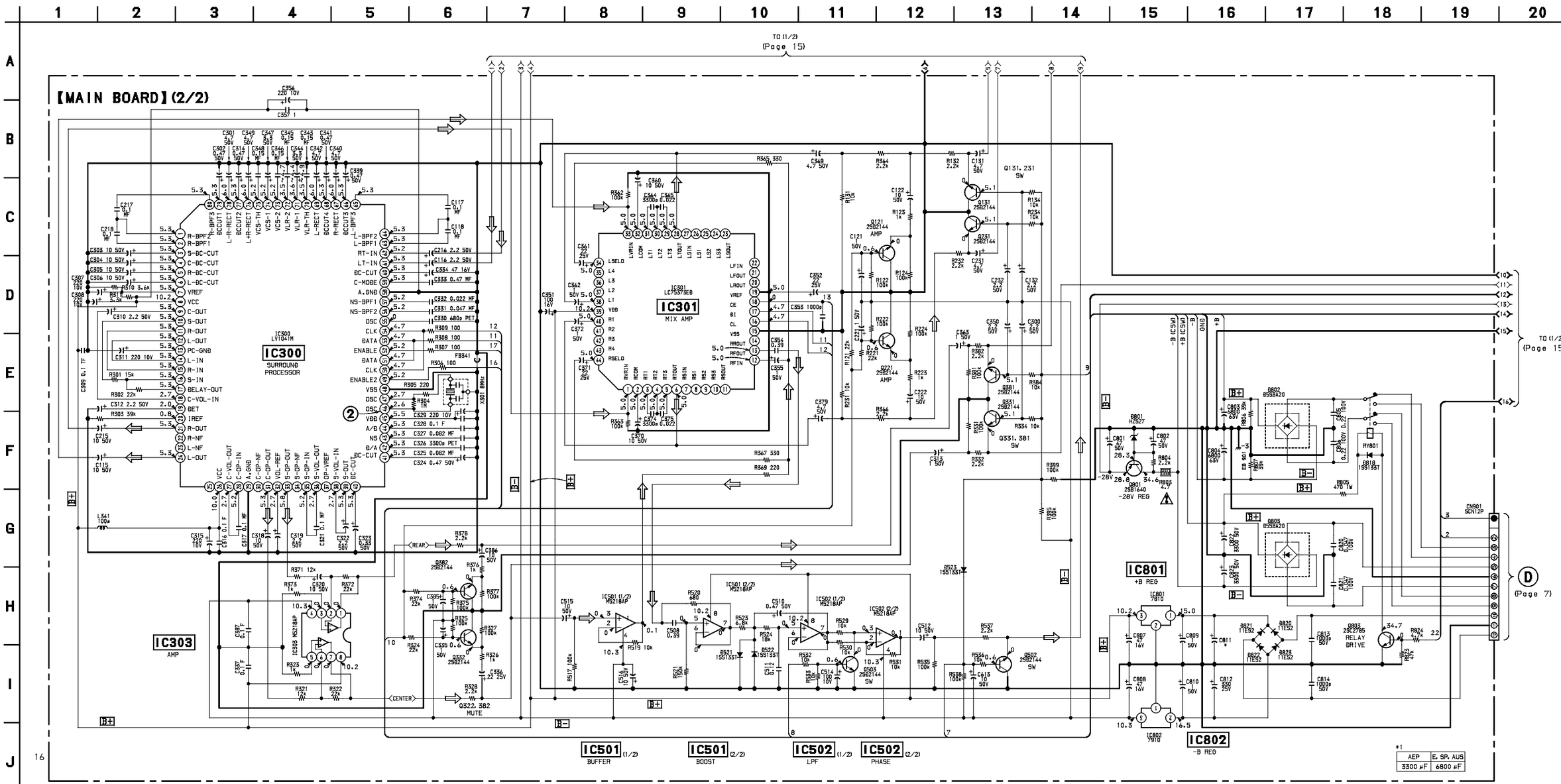
3-7. SCHEMATIC DIAGRAM — MAIN SECTION (1/2) —

• See page 22 for IC Block Diagrams.



3-8. SCHEMATIC DIAGRAM — MAIN SECTION (2/2) —

• See page 4 for Waveform. • See page 21,22 for IC Block Diagrams.



3-9. IC PIN FUNCTION DESCRIPTION

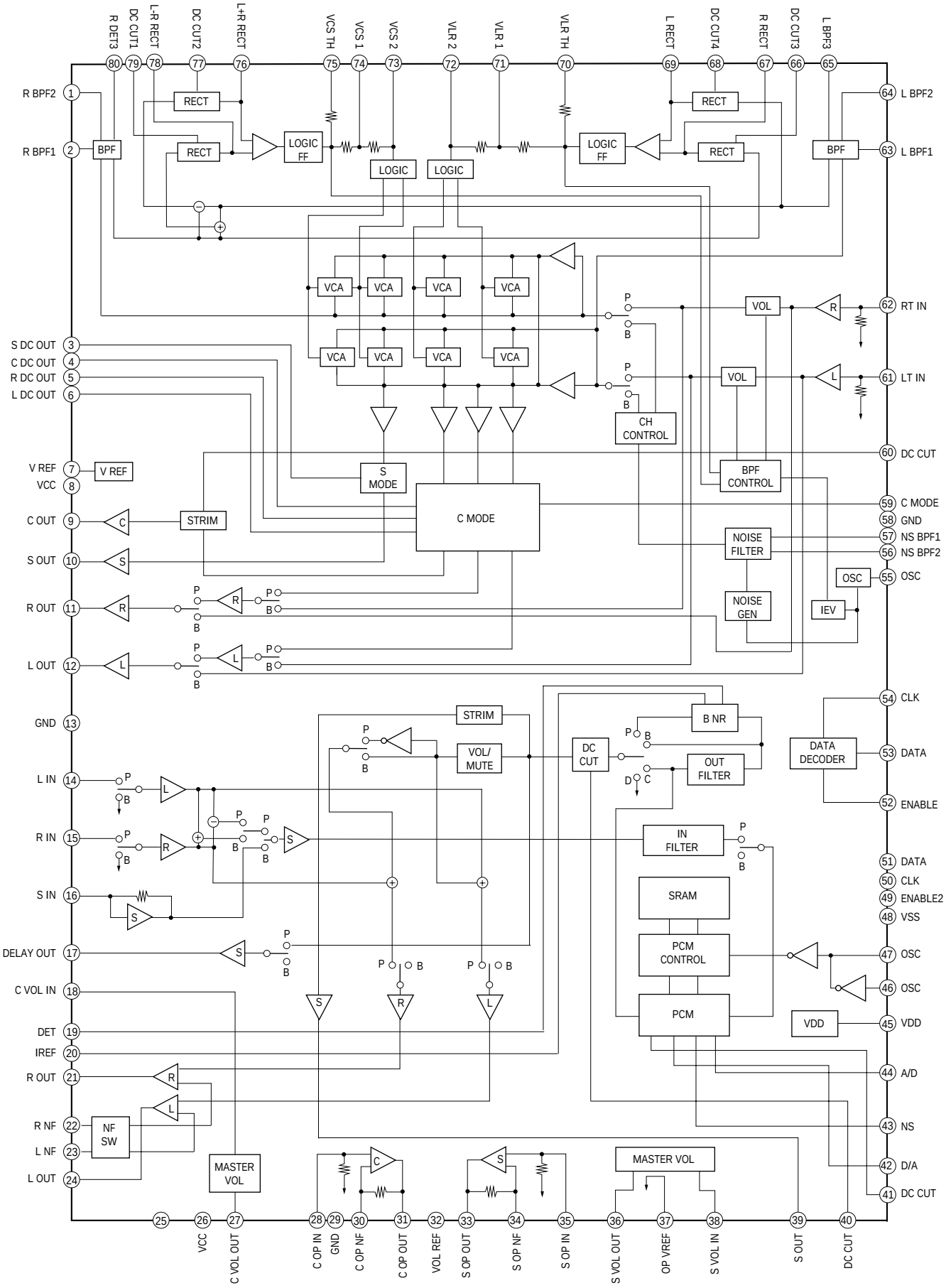
• IC401 µPD78042FGF-089-3B9 (DISPLAY BOARD)

Pin No.	Pin Name	I/O	Function
1	DIG 2	O	Fluorescent tube segment signal output
2	DIG 3	O	Fluorescent tube segment signal output
3	DIG 4	O	Fluorescent tube segment signal output
4	DIG 5	O	Fluorescent tube segment signal output
5	DIG 6	O	Fluorescent tube segment signal output
6	DIG 7	O	Fluorescent tube segment signal output
7	DIG 8	O	Fluorescent tube segment signal output
8	+5 V	—	Power supply +5 V
9	POWER-RY	O	Power-relay ON/OFF drive signal output H when power is on
10	BRIDGE. RY	O	Bridge relay drive signal output H when surround is off
11	WOOFER RELAY	O	Woofer relay drive signal output H when super woofer is on
12	SURR. RY	O	Surround speaker relay ON/OFF drive signal output H when surrounded speaker is on
13	FRONT. RY	O	Front speaker relay ON/OFF drive signal output H when power is on
14	HP. RY	O	Headphone relay ON/OFF drive signal output H when headphone plug in is detected
15	LV1041. CE1	O	Chip enable signal output. Transfer center and rear speaker data at low
16	LV1041. CE2	O	Chip enable signal output. Transfer Dolby and surround data at low
17	$\overline{\text{RESET}}$	I	Reset signal input
18	$\overline{\text{P. CHECK}}$	I	Power check input (Connected to ground)
19	HP. SW	I	PHONES jack in detection pin
20	AVSS	—	Ground
21	IC. MUTE	O	Mute control output Low for IC-muting
22	LC7822. CE	O	Chip enable signal output Transfer data at 4 bit low and 8 bit high
23	LC75373. CE	O	Chip enable signal output Transfer IC address at low, data at high
24	CLOCK	O	Serial clock output
25	DATA	O	Serial data output
26	VERSION	I	Destination discrimination pin (Connected to reference voltage)
27	KEY. 2	I	Key matrix input 2
28	KEY. 1	I	Key matrix input 1
29	AVDD	—	Power supply +5 V
30	AV. REF	—	Power supply +5 V
31	BACKUP	I	Backup signal input, monitoring the microprocessor voltage at all times
32	XT 2	—	Not used
33	VSS	—	Ground
34	X 1	—	X'tal (5 MHz)
35	X 2	—	X'tal (5 MHz)
36	TONE LED	O	TONE LED drive signal output. ACTIVE LOW when BASS/TREBLE level adjusting mode
37	CENTER LED	O	CENTER LED drive signal output ACTIVE LOW when Center level adjusting mode
38	REAR LED	O	REAR LED drive signal output ACTIVE LOW when rear level mode
39	WOOFER LED	O	WOOFER LED drive signal output ACTIVE LOW when woofer level adjusting mode
40	S.W. LED	O	S.W. LED drive signal output ACTIVE LOW when super woofer is on
41	DOLBY LED	O	DOLBY LED drive signal output ACTIVE LOW when surround Dolby or sound field mode is selected
42	HALL LED	O	HALL LED drive signal output ACTIVE LOW when surround hall or surround field classic is selected
43	SIMULATED LED	O	SIMULATED LED drive signal output ACTIVE LOW when surround SIMU or surround field game is selected
44	VOL. B	I	Volume encoder signal input
45	VOL. A	I	Volume encoder signal input
46	$\overline{\text{PROTECT}}$	I	Protect signal input
47	$\overline{\text{SIRCS}}$	I	SIRCS signal input
48	VSS	—	Ground
49	GND	—	Ground
50	GND	—	Ground

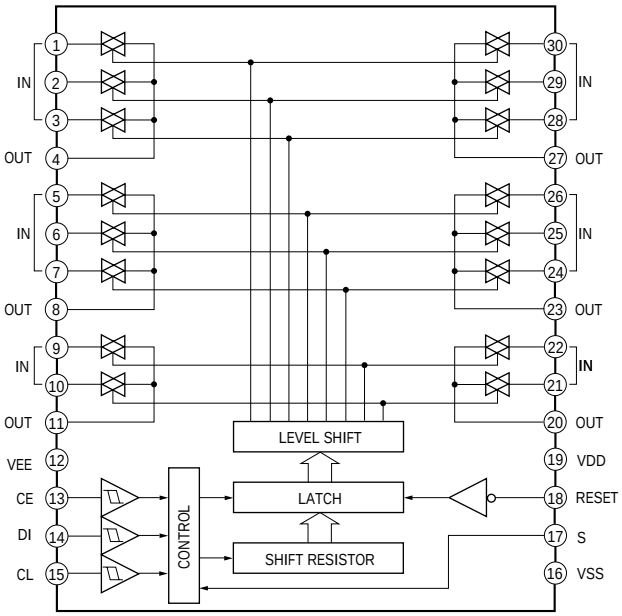
Pin No.	Pin Name	I/O	Function
51	GND	—	Ground
52	+5 V	—	Power supply +5 V
53	10DB. ATT	O	10 dB ATT. switch output H when volume ATT. is used
54	FUNC. MUTE	O	Line mute control output H for muting
55	S.W. PHASE	O	Super Woofer phase switch output L for normal, H for reverse
56	STANDBY LED	O	STANDBY LED drive signal output
57	NC	—	Not connected
58	NC	—	Not connected
59	S 18	O	Fluorescent tube segment signal output
60	S 17	O	Fluorescent tube segment signal output
61	S 16	O	Fluorescent tube segment signal output
62	S 15	O	Fluorescent tube segment signal output
63	S 14	O	Fluorescent tube segment signal output
64	S 13	O	Fluorescent tube segment signal output
65	S 12	O	Fluorescent tube segment signal output
66	S 11	O	Fluorescent tube segment signal output
67	S 10	O	Fluorescent tube segment signal output
68	S 9	O	Fluorescent tube segment signal output
69	S 8	O	Fluorescent tube segment signal output
70	S 7	O	Fluorescent tube segment signal output
71	VLOAD	—	Power supply –28 V power supply for fluorescent tube segment
72	S 6	O	Fluorescent tube segment signal output
73	S 5	O	Fluorescent tube segment signal output
74	S 4	O	Fluorescent tube segment signal output
75	S 3	O	Fluorescent tube segment signal output
76	S 2	O	Fluorescent tube segment signal output
77	S 1	O	Fluorescent tube segment signal output
78	NC	—	Not connected
79	NC	—	Not connected
80	DIGI	O	Fluorescent tube segment signal output

3-10. IC BLOCK DIAGRAMS

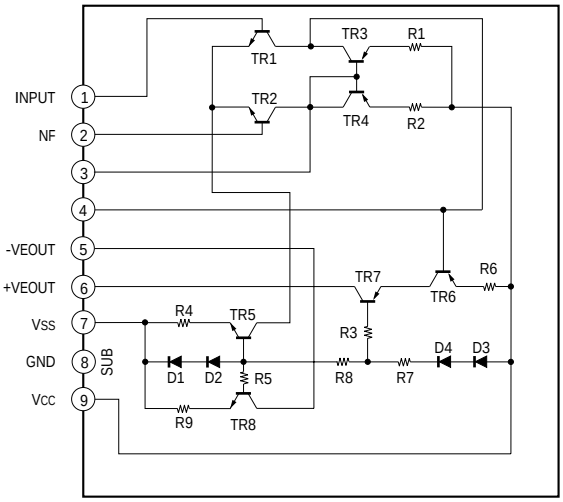
IC300 LV1041M (MAIN BOARD)



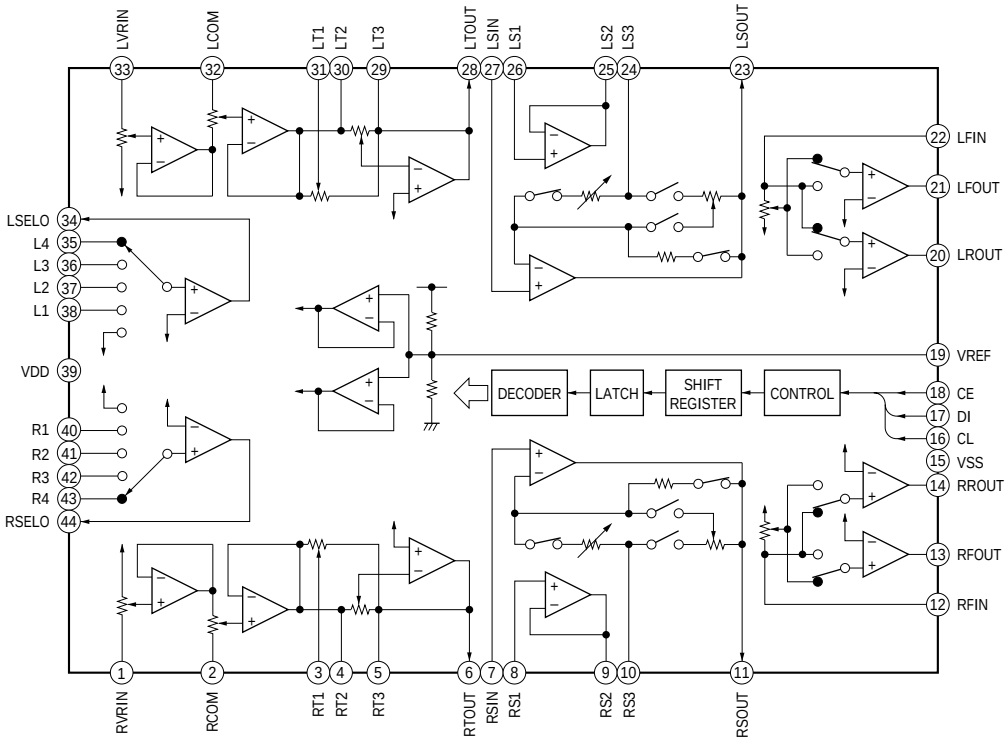
IC101 LC7822 (MAIN BOARD)



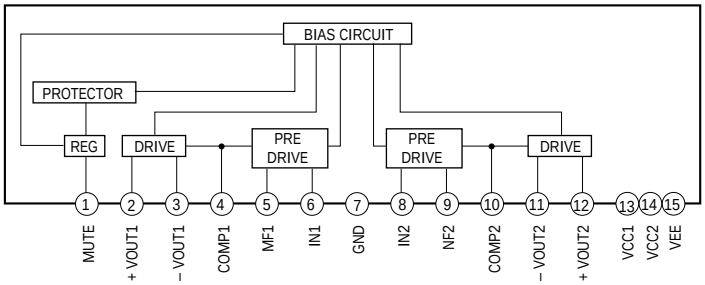
IC551 STK350-230 (MAIN BOARD)



IC301 LC75373ED (MAIN BOARD)



IC701 µPC2581V (MAIN BOARD)

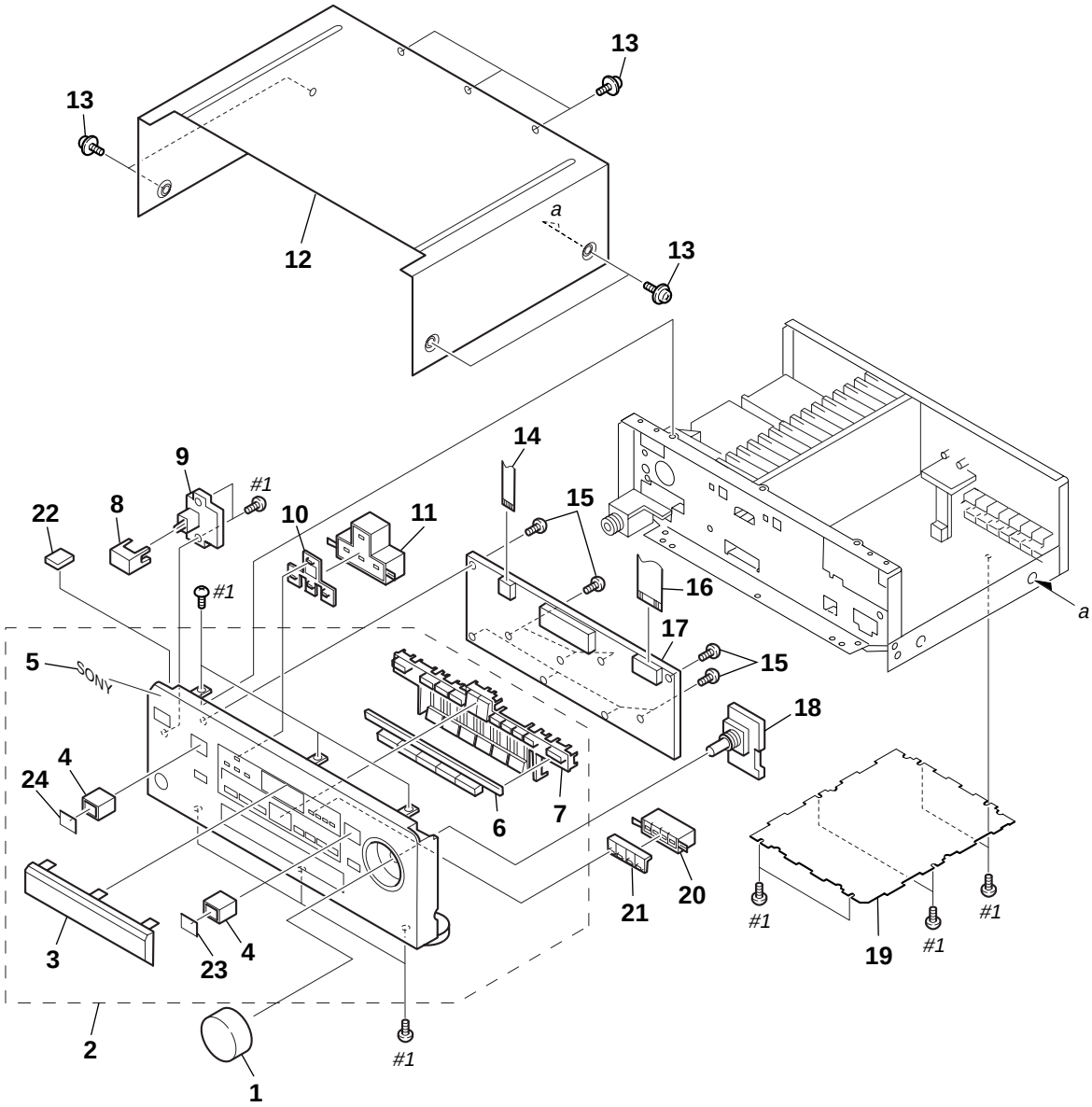


SECTION 4
EXPLODED VIEWS

NOTE:
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation
  AUS : Australian model.
  SP : Singapore model.

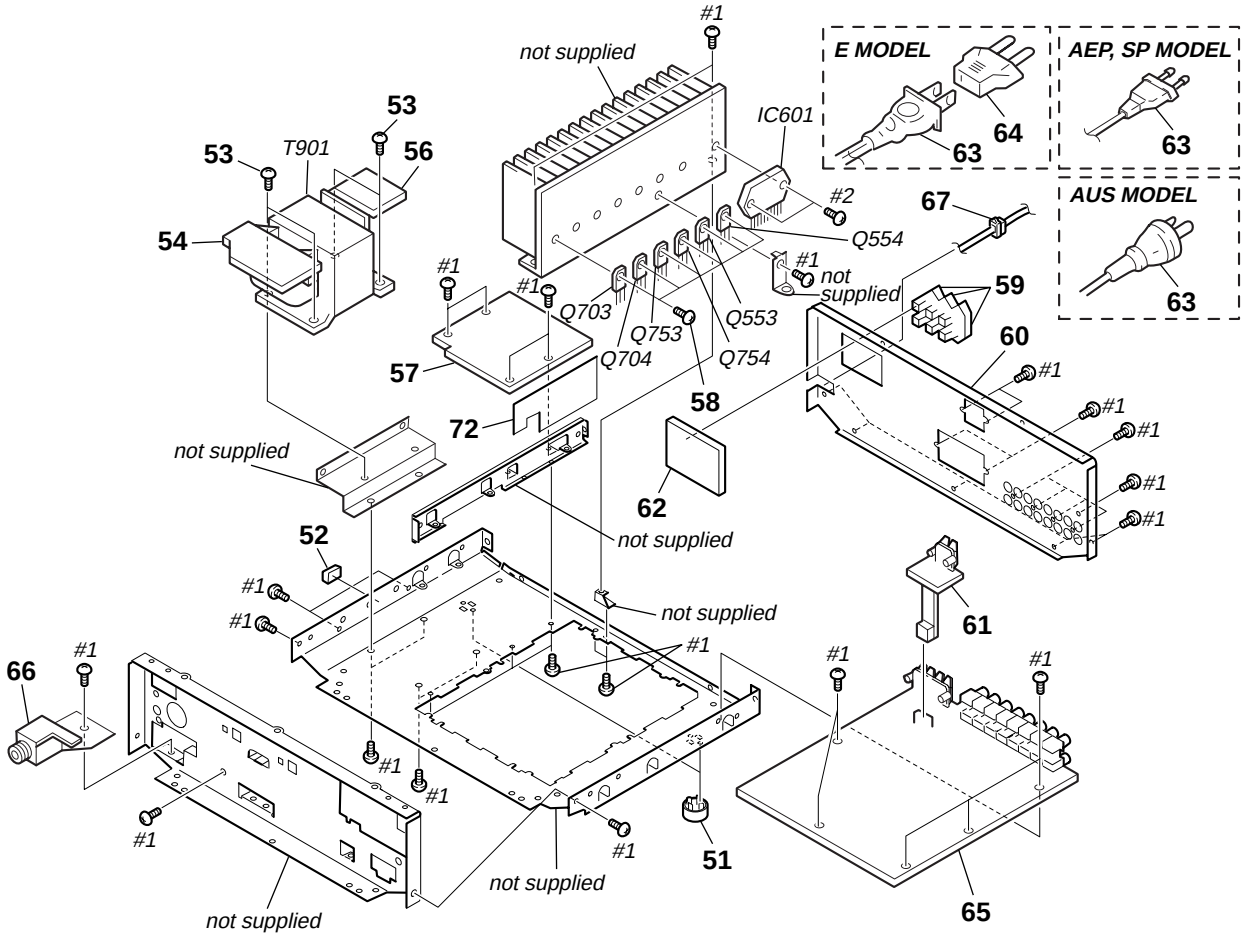
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

4-1. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remarks
1	4-999-844-01	KNOB (VOL)	
2	X-4949-434-3	PANEL ASSY, FRONT	
3	4-979-942-13	WINDOW	
* 4	4-982-462-01	HOUSE, LED	
5	4-963-404-02	EMBLEM (5-A), SONY	
6	4-979-941-01	BUTTON (SUR)	
7	4-979-935-01	BUTTON (F-6)	
8	4-980-109-51	BUTTON (P-M)	
* 9	1-670-206-11	SW BOARD	
* 10	4-982-814-01	LENS (SUR)	
* 11	4-982-816-01	BOX (SUR), LED	
* 12	4-979-945-01	CASE (414532)	
13	3-710-901-11	SCREW, TAPPING	
14	1-769-867-11	WIRE (FLAT TYPE) (5 CORE)	
15	4-951-620-01	SCREW (2.6 × 8), +BVTP	
16	1-773-217-11	WIRE (FLAT TYPE) (25 CORE)	
* 17	A-4407-853-A	DISPLAY BOARD, COMPLETE	
* 18	1-669-721-11	VOL BOARD	
* 19	4-979-946-01	PLATE (432), BOTTOM	
* 20	4-982-817-01	BOX (CON), LED	
* 21	4-982-815-01	LENS (CON)	
22	4-628-006-01	CUSHION	
23	4-979-937-11	FILTER (SUPER WOOFER)	
24	4-979-937-01	FILTER (DOLBY PRO LOGIC)	

4-2. CHASSIS SECTION


E MODEL
AEP, SP MODEL
AUS MODEL
not supplied
IC601
T901
Q554
Q703
Q753
Q704
Q553
Q754
not supplied
not supplied
not supplied

SECTION 5
ELECTRICAL PARTS LIST

DISPLAY

NOTE:

When indicating parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

- Abbreviation
  AUS : Australian model.
  SP : Singapore model.
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS:
  uF: µF
- RESISTORS
  All resistors are in ohms.
  METAL: metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- COILS
  uH: µH
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA...: µA... , uPA... , µPA... , uPB... , µPB... , uPC... , µPC... , uPD..., µPD...

Ref. No.	Part No.	Description			Remarks
*	A-4407-853-A	DISPLAY BOARD, COMPLETE **********			
*	4-921-941-01	CUSHION (FL)			
*	4-979-943-01	HOLDER, FL TUBE			
		< CAPACITOR >			
C401	1-162-306-11	CERAMIC	0.01uF	20%	16V
C402	1-162-306-11	CERAMIC	0.01uF	20%	16V
C403	1-124-903-11	ELECT	1uF	20%	50V
C404	1-124-903-11	ELECT	1uF	20%	50V
C405	1-126-934-11	ELECT	220uF	20%	10V
C406	1-124-907-11	ELECT	10uF	20%	50V
C407	1-124-907-11	ELECT	10uF	20%	50V
C408	1-164-159-11	CERAMIC	0.1uF		50V
C409	1-136-165-00	FILM	0.1uF	5%	50V
C410	1-164-159-11	CERAMIC	0.1uF		50V
C411	1-164-159-11	CERAMIC	0.1uF		50V
C412	1-161-494-00	CERAMIC	0.022uF		25V
C413	1-162-294-31	CERAMIC	0.001uF	10%	50V
C414	1-161-494-00	CERAMIC	0.022uF		25V
		< CONNECTOR >			
* CN401	1-568-848-11	SOCKET, CONNECTOR 5P			
* CN402	1-568-867-11	SOCKET, CONNECTOR 25P			
CN403	1-750-194-11	CONNECTOR, BOARD TO BOARD 4P			
CN405	1-770-397-11	HOUSING, CONNECTOR(PC BOARD)4P			
CN408	1-568-662-11	CONNECTOR, BOARD TO BOARD 6P			
		< DIODE >			
D401	8-719-118-51	DIODE RD3.9F-T7B1			
D402	8-719-911-19	DIODE 1SS119			
D403	8-719-911-19	DIODE 1SS119			
D404	8-719-911-19	DIODE 1SS119			
D406	8-719-911-19	DIODE 1SS119			
D407	8-719-313-45	DIODE SEL6810A-TH10 (TONE)			
D408	8-719-313-45	DIODE SEL6810A-TH10 (CENTER)			
D409	8-719-313-45	DIODE SEL6810A-TH10 (REAR)			
D410	8-719-313-45	DIODE SEL6810A-TH10 (WOOFER)			
D411	8-719-032-98	DIODE SEL5820A (SUPER WOOFER)			
D412	8-719-032-98	DIODE SEL5820A (SUPER WOOFER)			
D413	8-719-032-98	DIODE SEL5820A (DOLBY PRO LOGIC)			
D414	8-719-032-98	DIODE SEL5820A (DOLBY PRO LOGIC)			
D415	8-719-313-45	DIODE SEL6810A-TH10 (DOLBY)			
D416	8-719-313-45	DIODE SEL6810A-TH10 (HALL)			
D417	8-719-313-45	DIODE SEL6810A-TH10 (SIMULATED)			
D418	8-719-313-45	DIODE SEL6810A-TH10 (STANDBY)			
D419	8-719-911-19	DIODE 1SS119			

Ref. No.	Part No.	Description			Remarks
		< FILTER >			
FL401	1-517-512-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC401	8-759-564-52	IC uPD78042FGF-089-3B9			
IC402	8-759-165-81	IC PST600D-T			
IC403	8-759-373-49	IC NJL54H400			
		< TRANSISTOR >			
Q401	8-729-119-78	TRANSISTOR 2SC403SP-51			
Q402	8-729-900-63	TRANSISTOR DTA124ES			
Q403	8-729-900-36	TRANSISTOR DTC124ES			
Q404	8-729-900-63	TRANSISTOR DTA124ES			
		< RESISTOR >			
R401	1-249-429-11	CARBON	10K	5%	1/4W
R402	1-249-429-11	CARBON	10K	5%	1/4W
R403	1-247-807-31	CARBON	100	5%	1/4W
R404	1-247-807-31	CARBON	100	5%	1/4W
R405	1-247-807-31	CARBON	100	5%	1/4W
R406	1-247-807-31	CARBON	100	5%	1/4W
R407	1-247-807-31	CARBON	100	5%	1/4W
R408	1-247-807-31	CARBON	100	5%	1/4W
R409	1-247-807-31	CARBON	100	5%	1/4W
R410	1-247-807-31	CARBON	100	5%	1/4W
R421	1-249-437-11	CARBON	47K	5%	1/4W
R422	1-249-437-11	CARBON	47K	5%	1/4W
R423	1-249-437-11	CARBON	47K	5%	1/4W
R424	1-249-437-11	CARBON	47K	5%	1/4W
R425	1-249-437-11	CARBON	47K	5%	1/4W
R426	1-249-437-11	CARBON	47K	5%	1/4W
R427	1-249-437-11	CARBON	47K	5%	1/4W
R428	1-249-437-11	CARBON	47K	5%	1/4W
R429	1-249-437-11	CARBON	47K	5%	1/4W
R430	1-249-437-11	CARBON	47K	5%	1/4W
R431	1-249-437-11	CARBON	47K	5%	1/4W
R432	1-249-437-11	CARBON	47K	5%	1/4W
R433	1-247-807-31	CARBON	100	5%	1/4W
R434	1-247-807-31	CARBON	100	5%	1/4W
R435	1-247-807-31	CARBON	100	5%	1/4W
R436	1-247-807-31	CARBON	100	5%	1/4W
R437	1-247-807-31	CARBON	100	5%	1/4W
R438	1-247-807-31	CARBON	100	5%	1/4W
R439	1-247-807-31	CARBON	100	5%	1/4W
R440	1-247-807-31	CARBON	100	5%	1/4W

DISPLAY **HP** **MAIN**

Ref. No.	Part No.	Description			Remarks
R441	1-247-807-31	CARBON	100	5%	1/4W
R442	1-247-807-31	CARBON	100	5%	1/4W
R443	1-247-807-31	CARBON	100	5%	1/4W
R444	1-247-807-31	CARBON	100	5%	1/4W
R445	1-247-807-31	CARBON	100	5%	1/4W
R446	1-247-807-31	CARBON	100	5%	1/4W
R447	1-249-429-11	CARBON	10K	5%	1/4W
R448	1-249-429-11	CARBON	10K	5%	1/4W
R449	1-249-429-11	CARBON	10K	5%	1/4W
R450	1-249-437-11	CARBON	47K	5%	1/4W
R451	1-249-437-11	CARBON	47K	5%	1/4W
R452	1-249-429-11	CARBON	10K	5%	1/4W
R453	1-249-429-11	CARBON	10K	5%	1/4W
R454	1-247-903-00	CARBON	1M	5%	1/4W
R455	1-249-409-11	CARBON	220	5%	1/4W F
R456	1-249-402-11	CARBON	56	5%	1/4W F
R457	1-249-402-11	CARBON	56	5%	1/4W F
R458	1-249-409-11	CARBON	220	5%	1/4W F
R459	1-249-409-11	CARBON	220	5%	1/4W F
R460	1-249-441-11	CARBON	100K	5%	1/4W
R461	1-249-419-11	CARBON	1.5K	5%	1/4W F
R462	1-249-401-11	CARBON	47	5%	1/4W F
R463	1-249-403-11	CARBON	68	5%	1/4W F
R464	1-247-807-31	CARBON	100	5%	1/4W
R465	1-249-407-11	CARBON	150	5%	1/4W F
R467	1-249-420-11	CARBON	1.8K	5%	1/4W F
R468	1-249-417-11	CARBON	1K	5%	1/4W F
R469	1-249-419-11	CARBON	1.5K	5%	1/4W F
R470	1-249-421-11	CARBON	2.2K	5%	1/4W F
R471	1-247-843-11	CARBON	3.3K	5%	1/4W
R472	1-249-427-11	CARBON	6.8K	5%	1/4W F
R473	1-249-431-11	CARBON	15K	5%	1/4W
R474	1-249-419-11	CARBON	1.5K	5%	1/4W F
R475	1-249-401-11	CARBON	47	5%	1/4W F
R476	1-249-403-11	CARBON	68	5%	1/4W F
R477	1-247-807-31	CARBON	100	5%	1/4W
R478	1-249-407-11	CARBON	150	5%	1/4W F
R479	1-249-407-11	CARBON	150	5%	1/4W F
R480	1-249-409-11	CARBON	220	5%	1/4W F
R481	1-249-411-11	CARBON	330	5%	1/4W
R482	1-249-413-11	CARBON	470	5%	1/4W F
R483	1-249-415-11	CARBON	680	5%	1/4W F
R484	1-249-417-11	CARBON	1K	5%	1/4W F
R485	1-249-409-11	CARBON	220	5%	1/4W F
R486	1-249-429-11	CARBON	10K	5%	1/4W
R487	1-249-429-11	CARBON	10K	5%	1/4W
		< SWITCH >			
S402	1-762-875-21	SWITCH, KEYBOARD (CENTER MODE)			
S403	1-762-875-21	SWITCH, KEYBOARD (DOLBY)			
S404	1-762-875-21	SWITCH, KEYBOARD (HALL)			
S405	1-762-875-21	SWITCH, KEYBOARD (SIMULATED)			
S406	1-762-875-21	SWITCH, KEYBOARD (+)			
S407	1-762-875-21	SWITCH, KEYBOARD (-)			
S408	1-762-875-21	SWITCH, KEYBOARD (TONE)			
S409	1-762-875-21	SWITCH, KEYBOARD (CENTER)			
S410	1-762-875-21	SWITCH, KEYBOARD (REAR)			
S411	1-762-875-21	SWITCH, KEYBOARD (WOOFER)			

Ref. No.	Part No.	Description			Remarks
S412	1-762-875-21	SWITCH, KEYBOARD (WOOFER ON/OFF)			
S413	1-762-875-21	SWITCH, KEYBOARD (1 LOCK)			
S414	1-762-875-21	SWITCH, KEYBOARD (2 POPS)			
S415	1-762-875-21	SWITCH, KEYBOARD (3 CLASSIC)			
S416	1-762-875-21	SWITCH, KEYBOARD (4 MODE)			
S417	1-762-875-21	SWITCH, KEYBOARD (5 GAME)			
S418	1-762-875-21	SWITCH, KEYBOARD (PHONO)			
S419	1-762-875-21	SWITCH, KEYBOARD (TUNER)			
S420	1-762-875-21	SWITCH, KEYBOARD (CD)			
S421	1-762-875-21	SWITCH, KEYBOARD (TAPE)			
S422	1-762-875-21	SWITCH, KEYBOARD (VIDEO 2)			
S423	1-762-875-21	SWITCH, KEYBOARD (VIDEO 1)			
		< VIBRATOR >			
X401	1-579-233-11	VIBRATOR, CERAMIC 5MHz			
**********					
*	1-669-722-11	HP BOARD			
		********			
		< CAPACITOR >			
C415	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C416	1-164-159-11	CERAMIC	0.1uF		50V
C465	1-162-302-11	CERAMIC	0.0022uF	30%	16V
		< CONNECTOR >			
CN406	1-770-388-11	PIN, CONNECTOR (PC BOARD) 4P			
		< JACK >			
J401	1-569-113-11	JACK, LARGE TYPE (PHONES)			
**********					
*	A-4407-401-A	MAIN BOARD, COMPLETE (E,SP,AUS)			
		********			
*	A-4407-848-A	MAIN BOARD, COMPLETE (AEP)			
		**********			
	7-685-646-01	SCREW +BVTP 3 × 8 TYPE1			
		< CAPACITOR >			
C101	1-126-963-11	ELECT	4.7uF	20%	50V
C102	1-162-282-31	CERAMIC	100PF	10%	50V
C103	1-126-964-11	ELECT	10uF	20%	50V
C104	1-137-437-11	FILM	0.0056uF	5%	50V
C105	1-137-365-11	FILM	0.0015uF	5%	50V
C106	1-126-960-11	ELECT	1uF	20%	50V
C107	1-164-159-11	CERAMIC	0.1uF		50V
C109	1-162-294-31	CERAMIC	0.001uF	10%	50V
C115	1-126-964-11	ELECT	10uF	20%	50V
C116	1-126-961-11	ELECT	2.2uF	20%	50V
C117	1-136-165-00	FILM	0.1uF	5%	50V
C118	1-136-165-00	FILM	0.1uF	5%	50V
C121	1-126-960-11	ELECT	1uF	20%	50V
C122	1-126-964-11	ELECT	10uF	20%	50V
C131	1-126-963-11	ELECT	4.7uF	20%	50V
C132	1-126-961-11	ELECT	2.2uF	20%	50V
C151	1-126-963-11	ELECT	4.7uF	20%	50V
C152	1-162-282-31	CERAMIC	100PF	10%	50V
C153	1-126-964-11	ELECT	10uF	20%	50V
C154	1-137-437-11	FILM	0.0056uF	5%	50V

Ref. No.	Part No.	Description			Remarks
C155	1-137-365-11	FILM	0.0015uF	5%	50V
C156	1-126-960-11	ELECT	1uF	20%	50V
C157	1-164-159-11	CERAMIC	0.1uF		50V
C158	1-162-291-31	CERAMIC	560PF	10%	50V
C159	1-136-165-00	FILM	0.1uF	5%	50V
C214	1-136-165-00	FILM	0.1uF	5%	50V
C215	1-126-964-11	ELECT	10uF	20%	50V
C216	1-126-961-11	ELECT	2.2uF	20%	50V
C217	1-136-165-00	FILM	0.1uF	5%	50V
C218	1-136-165-00	FILM	0.1uF	5%	50V
C221	1-126-960-11	ELECT	1uF	20%	50V
C222	1-126-964-11	ELECT	10uF	20%	50V
C231	1-126-963-11	ELECT	4.7uF	20%	50V
C232	1-126-961-11	ELECT	2.2uF	20%	50V
C300	1-126-961-11	ELECT	2.2uF	20%	50V
C301	1-126-963-11	ELECT	4.7uF	20%	50V
C302	1-126-959-11	ELECT	0.47uF	20%	50V
C303	1-126-964-11	ELECT	10uF	20%	50V
C304	1-126-964-11	ELECT	10uF	20%	50V
C305	1-126-964-11	ELECT	10uF	20%	50V
C306	1-126-964-11	ELECT	10uF	20%	50V
C307	1-126-934-11	ELECT	220uF	20%	10V
C308	1-126-934-11	ELECT	220uF	20%	10V
C309	1-136-165-00	FILM	0.1uF	5%	50V
C310	1-126-961-11	ELECT	2.2uF	20%	50V
C311	1-126-934-11	ELECT	220uF	20%	10V
C312	1-126-961-11	ELECT	2.2uF	20%	50V
C313	1-126-960-11	ELECT	1uF	20%	50V
C314	1-126-959-11	ELECT	0.47uF	20%	50V
C315	1-126-934-11	ELECT	220uF	20%	10V
C316	1-136-165-00	FILM	0.1uF	5%	50V
C317	1-136-165-00	FILM	0.1uF	5%	50V
C318	1-126-964-11	ELECT	10uF	20%	50V
C319	1-126-961-11	ELECT	2.2uF	20%	50V
C320	1-126-964-11	ELECT	10uF	20%	50V
C321	1-136-165-00	FILM	0.1uF	5%	50V
C322	1-126-961-11	ELECT	2.2uF	20%	50V
C323	1-124-252-00	ELECT	0.33uF	20%	50V
C324	1-126-959-11	ELECT	0.47uF	20%	50V
C325	1-136-164-00	FILM	0.082uF	5%	50V
C326	1-137-367-11	FILM	0.0033uF	5%	50V
C327	1-136-164-00	FILM	0.082uF	5%	50V
C328	1-136-165-00	FILM	0.1uF	5%	50V
C329	1-126-934-11	ELECT	220uF	20%	10V
C330	1-130-469-00	MYLAR	680PF	5%	50V
C331	1-136-161-00	FILM	0.047uF	5%	50V
C332	1-136-157-00	FILM	0.022uF	5%	50V
C333	1-136-173-00	FILM	0.47uF	5%	50V
C334	1-104-664-11	ELECT	47uF	20%	16V
C335	1-126-960-11	ELECT	1uF	20%	50V
C336	1-128-551-11	ELECT	22uF	20%	25V
C337	1-136-165-00	FILM	0.1uF	5%	50V
C339	1-126-959-11	ELECT	0.47uF	20%	50V
C340	1-126-963-11	ELECT	4.7uF	20%	50V
C341	1-126-959-11	ELECT	0.47uF	20%	50V
C342	1-126-963-11	ELECT	4.7uF	20%	50V
C343	1-136-167-00	FILM	0.15uF	5%	50V
C344	1-126-962-11	ELECT	3.3uF	20%	50V
C345	1-136-167-00	FILM	0.15uF	5%	50V
C346	1-136-167-00	FILM	0.15uF	5%	50V
C347	1-126-962-11	ELECT	3.3uF	20%	50V
C348	1-136-167-00	FILM	0.15uF	5%	50V
C349	1-126-963-11	ELECT	4.7uF	20%	50V
C350	1-126-961-11	ELECT	2.2uF	20%	50V
C351	1-126-933-11	ELECT	100uF	20%	16V
C352	1-128-551-11	ELECT	22uF	20%	25V
C353	1-162-294-31	CERAMIC	0.001uF	10%	50V
C354	1-137-193-11	FILM	0.39uF	5%	50V
C355	1-126-960-11	ELECT	1uF	20%	50V
C356	1-126-934-11	ELECT	220uF	20%	10V
C357	1-136-177-00	FILM	1uF	5%	50V
C360	1-126-964-11	ELECT	10uF	20%	50V
C361	1-128-551-11	ELECT	22uF	20%	25V
C362	1-126-960-11	ELECT	1uF	20%	50V
C363	1-126-960-11	ELECT	1uF	20%	50V
C364	1-137-367-11	FILM	0.0033uF	5%	50V
C365	1-136-157-00	FILM	0.022uF	5%	50V
C369	1-126-963-11	ELECT	4.7uF	20%	50V
C370	1-126-964-11	ELECT	10uF	20%	50V
C371	1-128-551-11	ELECT	22uF	20%	25V
C372	1-126-960-11	ELECT	1uF	20%	50V
C374	1-137-367-11	FILM	0.0033uF	5%	50V
C375	1-136-157-00	FILM	0.022uF	5%	50V
C379	1-126-963-11	ELECT	4.7uF	20%	50V
C385	1-126-960-11	ELECT	1uF	20%	50V
C386	1-126-964-11	ELECT	10uF	20%	50V
C387	1-136-165-00	FILM	0.1uF	5%	50V
C501	1-164-159-11	CERAMIC	0.1uF		50V
C502	1-162-286-31	CERAMIC	220PF	10%	50V
C503	1-162-286-31	CERAMIC	220PF	10%	50V
C508	1-137-193-11	FILM	0.39uF	5%	50V
C510	1-126-959-11	ELECT	0.47uF	20%	50V
C511	1-136-166-00	FILM	0.12uF	5%	50V
C512	1-126-964-11	ELECT	10uF	20%	50V
C514	1-104-665-11	ELECT	100uF	20%	10V
C515	1-126-964-11	ELECT	10uF	20%	50V
C516	1-126-964-11	ELECT	10uF	20%	50V
C540	1-128-560-11	ELECT	22uF	20%	100V
C551	1-126-963-11	ELECT	4.7uF	20%	50V
C552	1-162-282-31	CERAMIC	100PF	10%	50V
C553	1-126-934-11	ELECT	220uF	20%	10V
C554	1-162-194-31	CERAMIC	3.9PF	10%	50V
C555	1-102-989-00	CERAMIC	68PF	5%	500V
C556	1-136-275-11	FILM	390PF	5%	630V
C560	1-104-664-11	ELECT	47uF	20%	16V
C561	1-137-372-11	FILM	0.022uF	5%	50V
C570	1-162-286-31	CERAMIC	220PF	10%	50V
C601	1-126-963-11	ELECT	4.7uF	20%	50V
C602	1-162-286-31	CERAMIC	220PF	10%	50V
C603	1-104-664-11	ELECT	47uF	20%	25V
C604	1-162-191-31	CERAMIC	2.2PF	10%	50V
C605	1-162-286-31	CERAMIC	220PF	10%	50V
C606	1-126-967-11	ELECT	47uF	20%	50V
C607	1-126-968-11	ELECT	100uF	20%	50V
C608	1-126-968-11	ELECT	100uF	20%	50V
C611	1-136-163-00	FILM	0.068uF	5%	50V
C612	1-136-163-00	FILM	0.068uF	5%	50V
C613	1-126-964-11	ELECT	10uF	20%	50V
C620	1-164-159-11	CERAMIC	0.1uF		50V
C651	1-126-963-11	ELECT	4.7uF	20%	50V

MAIN

Ref. No.	Part No.	Description			Remarks
C652	1-162-286-31	CERAMIC	220PF	10%	50V
C653	1-104-664-11	ELECT	47uF	20%	25V
C654	1-162-191-31	CERAMIC	2.2PF	10%	50V
C655	1-162-286-31	CERAMIC	220PF	10%	50V
C656	1-126-967-11	ELECT	47uF	20%	50V
C657	1-126-965-11	ELECT	22uF	20%	50V
C658	1-126-968-11	ELECT	100uF	20%	50V
C659	1-126-968-11	ELECT	100uF	20%	50V
C661	1-136-163-00	FILM	0.068uF	5%	50V
C662	1-136-163-00	FILM	0.068uF	5%	50V
C670	1-164-159-11	CERAMIC	0.1uF		50V
C702	1-162-290-31	CERAMIC	470PF	10%	50V
C703	1-126-964-11	ELECT	10uF	20%	50V
C705	1-102-233-00	CERAMIC	33PF	10%	500V
C710	1-104-664-11	ELECT	47uF	20%	16V
C711	1-137-372-11	FILM	0.022uF	5%	50V
C720	1-162-286-31	CERAMIC	220PF	10%	50V
C721	1-126-934-11	ELECT	220uF	20%	10V
C722	1-126-965-11	ELECT	22uF	20%	50V
C740	1-128-552-51	ELECT	47uF	20%	63V
C741	1-128-552-51	ELECT	47uF	20%	63V
C742	1-126-934-11	ELECT	220uF	20%	10V
C752	1-162-290-31	CERAMIC	470PF	10%	50V
C753	1-126-964-11	ELECT	10uF	20%	50V
C755	1-102-233-00	CERAMIC	33PF	10%	500V
C760	1-104-664-11	ELECT	47uF	20%	16V
C761	1-137-372-11	FILM	0.022uF	5%	50V
C770	1-162-286-31	CERAMIC	220PF	10%	50V
C771	1-164-159-11	CERAMIC	0.1uF		50V
C772	1-137-372-11	FILM	0.022uF	5%	50V
C801	1-126-967-11	ELECT	47uF	20%	50V
C802	1-126-967-11	ELECT	47uF	20%	50V
C803	1-117-782-11	ELECT	6800uF	20%	63V
C804	1-117-782-11	ELECT	6800uF	20%	63V
C805	1-130-781-00	FILM	0.22uF	10%	100V
C806	1-130-781-00	FILM	0.22uF	10%	100V
C807	1-104-664-11	ELECT	47uF	20%	16V
C808	1-104-664-11	ELECT	47uF	20%	16V
C809	1-126-960-11	ELECT	1uF	20%	50V
C810	1-126-960-11	ELECT	1uF	20%	50V
C811	1-126-944-11	ELECT	3300uF	20%	25V (AEP)
C811	1-126-946-11	ELECT	6800uF	20%	25V (E,SP,AUS)
C812	1-126-940-11	ELECT	330uF	20%	25V
C813	1-164-088-11	CERAMIC	0.001uF		50V
C814	1-164-088-11	CERAMIC	0.001uF		50V
C820	1-137-397-11	FILM	0.047uF	5%	100V
C821	1-137-397-11	FILM	0.047uF	5%	100V
C822	1-126-974-11	ELECT	3300uF	20%	50V
C823	1-126-974-11	ELECT	3300uF	20%	50V
		< CONNECTOR >			
CN102	1-770-721-11	CONNECTOR, BOARD TO BOARD 4P			
* CN501	1-568-841-11	SOCKET, CONNECTOR 25P			

Ref. No.	Part No.	Description	Remarks
		< DIODE >	
D521	8-719-911-19	DIODE 1SS119	
D522	8-719-911-19	DIODE 1SS119	
D523	8-719-911-19	DIODE 1SS119	
D560	8-719-911-19	DIODE 1SS119	
D601	8-719-911-19	DIODE 1SS119	
D610	8-719-911-19	DIODE 1SS119	
D651	8-719-911-19	DIODE 1SS119	
D710	8-719-911-19	DIODE 1SS119	
D711	8-719-911-19	DIODE 1SS119	
D721	8-719-911-19	DIODE 1SS119	
D722	8-719-911-19	DIODE 1SS119	
D723	8-719-911-19	DIODE 1SS119	
D724	8-719-911-19	DIODE 1SS119	
D725	8-719-911-19	DIODE 1SS119	
D726	8-719-911-19	DIODE 1SS119	
D727	8-719-911-19	DIODE 1SS119	
D801	8-719-986-60	DIODE HZS27-3LTA	
D802	8-719-510-68	DIODE D5SBA20F01	
D803	8-719-510-68	DIODE D5SBA20F01	
D818	8-719-911-19	DIODE 1SS119	
D820	8-719-024-99	DIODE 11ES2-NTA2B	
D821	8-719-024-99	DIODE 11ES2-NTA2B	
D822	8-719-024-99	DIODE 11ES2-NTA2B	
D823	8-719-024-99	DIODE 11ES2-NTA2B	
		< EARTH >	
* EB901	1-537-738-21	TERMINAL, EARTH	
		< FERRITE BEAD >	
FB341	1-412-473-21	INDUCTOR 0UH	
		< IC >	
IC101	8-759-805-14	IC LC7822	
IC102	8-759-634-50	IC M5218AL	
IC300	8-759-526-39	IC LV1041M	
IC301	8-759-443-67	IC LC75373ED	
IC303	8-759-634-51	IC M5218AP	
IC501	8-759-634-51	IC M5218AP	
IC502	8-759-634-51	IC M5218AP	
IC551	8-749-011-16	IC STK350-230	
IC601	8-749-900-96	IC STK-4142MK2	
IC701	8-759-326-52	IC uPC2581V	
IC801	8-759-604-32	IC M5F7810	
IC802	8-759-604-50	IC M5F7910	
		< JACK >	
J101	1-766-558-41	JACK, PIN 8P (PHONO/TUNER/CD/TAPE OUT)	
J102	1-766-558-31	JACK, PIN 8P (TAPE IN/VIDEO 2/VIDEO 1)	
		< COIL >	
L341	1-410-521-11	INDUCTOR 100uH	

Ref. No.	Part No.	Description	Remarks
		< TRANSISTOR >	
Q121	8-729-922-37	TRANSISTOR 2SD2144S	
Q131	8-729-922-37	TRANSISTOR 2SD2144S	
Q221	8-729-922-37	TRANSISTOR 2SD2144S	
Q231	8-729-922-37	TRANSISTOR 2SD2144S	
Q331	8-729-922-37	TRANSISTOR 2SD2144S	
Q332	8-729-922-37	TRANSISTOR 2SD2144S	
Q381	8-729-922-37	TRANSISTOR 2SD2144S	
Q382	8-729-922-37	TRANSISTOR 2SD2144S	
Q502	8-729-922-37	TRANSISTOR 2SD2144S	
Q503	8-729-922-37	TRANSISTOR 2SD2144S	
Q551	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q552	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q553	8-749-010-25	TRANSISTOR MN2488-OPY-M	
Q554	8-749-010-26	TRANSISTOR MP1620-OPY-M	
Q560	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q570	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q610	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q620	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q670	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q701	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q702	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q703	8-749-010-25	TRANSISTOR MN2488-OPY-M	
Q704	8-749-010-26	TRANSISTOR MP1620-OPY-M	
Q710	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q711	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q720	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q721	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q722	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q723	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q740	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q751	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q752	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q753	8-749-010-25	TRANSISTOR MN2488-OPY-M	
Q754	8-749-010-26	TRANSISTOR MP1620-OPY-M	
Q770	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q801	8-729-030-19	TRANSISTOR 2SB1640	
Q803	8-729-119-78	TRANSISTOR 2SC403SP-51	
		< RESISTOR >	
R101	1-249-417-11	CARBON 1K 5% 1/4W	F
R102	1-249-417-11	CARBON 1K 5% 1/4W	F
R103	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R104	1-249-417-11	CARBON 1K 5% 1/4W	F
R105	1-249-417-11	CARBON 1K 5% 1/4W	F
R106	1-249-417-11	CARBON 1K 5% 1/4W	F
R107	1-249-417-11	CARBON 1K 5% 1/4W	F
R108	1-249-417-11	CARBON 1K 5% 1/4W	F
R109	1-249-427-11	CARBON 6.8K 5% 1/4W	F
R110	1-249-437-11	CARBON 47K 5% 1/4W	
R111	1-249-415-11	CARBON 680 5% 1/4W	F
R112	1-247-897-11	CARBON 560K 5% 1/4W	
R113	1-249-437-11	CARBON 47K 5% 1/4W	
R114	1-249-409-11	CARBON 220 5% 1/4W	F
R115	1-249-441-11	CARBON 100K 5% 1/4W	
R116	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R121	1-249-433-11	CARBON 22K 5% 1/4W	
R122	1-249-441-11	CARBON 100K 5% 1/4W	
R123	1-249-417-11	CARBON 1K 5% 1/4W	F
R124	1-249-441-11	CARBON 100K 5% 1/4W	

Ref. No.	Part No.	Description	Remarks
R131	1-249-429-11	CARBON 10K 5% 1/4W	
R132	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R134	1-249-429-11	CARBON 10K 5% 1/4W	
R151	1-249-417-11	CARBON 1K 5% 1/4W	F
R152	1-249-417-11	CARBON 1K 5% 1/4W	F
R153	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R154	1-249-417-11	CARBON 1K 5% 1/4W	F
R155	1-249-417-11	CARBON 1K 5% 1/4W	F
R156	1-249-417-11	CARBON 1K 5% 1/4W	F
R157	1-249-417-11	CARBON 1K 5% 1/4W	F
R158	1-249-417-11	CARBON 1K 5% 1/4W	F
R159	1-249-427-11	CARBON 6.8K 5% 1/4W	F
R160	1-249-437-11	CARBON 47K 5% 1/4W	
R161	1-249-415-11	CARBON 680 5% 1/4W	F
R162	1-247-897-11	CARBON 560K 5% 1/4W	
R163	1-249-437-11	CARBON 47K 5% 1/4W	
R164	1-249-409-11	CARBON 220 5% 1/4W	F
R165	1-249-441-11	CARBON 100K 5% 1/4W	
R201	1-249-417-11	CARBON 1K 5% 1/4W	F
R202	1-249-417-11	CARBON 1K 5% 1/4W	F
R203	1-249-441-11	CARBON 100K 5% 1/4W	
R204	1-249-441-11	CARBON 100K 5% 1/4W	
R221	1-249-433-11	CARBON 22K 5% 1/4W	
R222	1-249-441-11	CARBON 100K 5% 1/4W	
R223	1-249-417-11	CARBON 1K 5% 1/4W	F
R224	1-249-441-11	CARBON 100K 5% 1/4W	
R231	1-249-429-11	CARBON 10K 5% 1/4W	
R232	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R234	1-249-429-11	CARBON 10K 5% 1/4W	
R301	1-249-431-11	CARBON 15K 5% 1/4W	
R302	1-249-433-11	CARBON 22K 5% 1/4W	
R303	1-249-436-11	CARBON 39K 5% 1/4W	
R304	1-247-903-00	CARBON 1M 5% 1/4W	
R305	1-249-409-11	CARBON 220 5% 1/4W	F
R306	1-247-807-31	CARBON 100 5% 1/4W	
R307	1-247-807-31	CARBON 100 5% 1/4W	
R308	1-247-807-31	CARBON 100 5% 1/4W	
R309	1-247-807-31	CARBON 100 5% 1/4W	
R310	1-247-844-11	CARBON 3.6K 5% 1/4W	
R311	1-247-843-11	CARBON 3.3K 5% 1/4W	
R321	1-249-430-11	CARBON 12K 5% 1/4W	
R322	1-249-433-11	CARBON 22K 5% 1/4W	
R323	1-249-417-11	CARBON 1K 5% 1/4W	F
R324	1-249-433-11	CARBON 22K 5% 1/4W	
R325	1-249-441-11	CARBON 100K 5% 1/4W	
R326	1-249-417-11	CARBON 1K 5% 1/4W	F
R327	1-249-441-11	CARBON 100K 5% 1/4W	
R328	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R331	1-249-441-11	CARBON 100K 5% 1/4W	
R332	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R334	1-249-429-11	CARBON 10K 5% 1/4W	
R362	1-249-441-11	CARBON 100K 5% 1/4W	
R363	1-249-441-11	CARBON 100K 5% 1/4W	
R364	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R365	1-249-411-11	CARBON 330 5% 1/4W	
R366	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R367	1-249-411-11	CARBON 330 5% 1/4W	
R369	1-249-409-11	CARBON 220 5% 1/4W	F
R371	1-249-430-11	CARBON 12K 5% 1/4W	
R372	1-249-433-11	CARBON 22K 5% 1/4W	

MAIN

Ref. No.	Part No.	Description			Remarks
R373	1-249-417-11	CARBON	1K	5%	1/4W F
R374	1-249-433-11	CARBON	22K	5%	1/4W
R375	1-249-441-11	CARBON	100K	5%	1/4W
R376	1-249-417-11	CARBON	1K	5%	1/4W F
R377	1-249-441-11	CARBON	100K	5%	1/4W
R378	1-249-421-11	CARBON	2.2K	5%	1/4W F
R381	1-249-441-11	CARBON	100K	5%	1/4W
R382	1-249-421-11	CARBON	2.2K	5%	1/4W F
R384	1-249-429-11	CARBON	10K	5%	1/4W
R395	1-249-441-11	CARBON	100K	5%	1/4W
R399	1-249-441-11	CARBON	100K	5%	1/4W
R501	1-247-807-31	CARBON	100	5%	1/4W
R502	1-247-807-31	CARBON	100	5%	1/4W
R503	1-247-807-31	CARBON	100	5%	1/4W
R504	1-249-418-11	CARBON	1.2K	5%	1/4W F
R505	1-249-418-11	CARBON	1.2K	5%	1/4W F
R506	1-249-418-11	CARBON	1.2K	5%	1/4W F
R517	1-249-441-11	CARBON	100K	5%	1/4W
R518	1-249-441-11	CARBON	100K	5%	1/4W (AEP)
R519	1-249-429-11	CARBON	10K	5%	1/4W
R520	1-249-415-11	CARBON	680	5%	1/4W F
R521	1-247-887-00	CARBON	220K	5%	1/4W (AEP)
R521	1-247-883-00	CARBON	150K	5%	1/4W (E,SP,AUS)
R523	1-249-427-11	CARBON	6.8K	5%	1/4W F
R524	1-249-432-11	CARBON	18K	5%	1/4W
R529	1-249-429-11	CARBON	10K	5%	1/4W
R530	1-249-429-11	CARBON	10K	5%	1/4W
R531	1-249-429-11	CARBON	10K	5%	1/4W
R532	1-249-429-11	CARBON	10K	5%	1/4W
R533	1-249-429-11	CARBON	10K	5%	1/4W
R535	1-249-441-11	CARBON	100K	5%	1/4W
R536	1-249-429-11	CARBON	10K	5%	1/4W
R537	1-249-421-11	CARBON	2.2K	5%	1/4W F
R538	1-249-441-11	CARBON	100K	5%	1/4W (E,SP,AUS)
⚠R540	1-249-405-11	CARBON	100	5%	1/4W F
⚠R541	1-249-405-11	CARBON	100	5%	1/4W F
R551	1-249-417-11	CARBON	1K	5%	1/4W F
R552	1-249-438-11	CARBON	56K	5%	1/4W
R553	1-249-417-11	CARBON	1K	5%	1/4W F
R554	1-249-438-11	CARBON	56K	5%	1/4W
R555	1-249-413-11	CARBON	470	5%	1/4W F
R560	1-249-421-11	CARBON	2.2K	5%	1/4W F
R561	1-249-437-11	CARBON	47K	5%	1/4W
R563	1-249-414-11	CARBON	560	5%	1/4W F
⚠R564	1-249-408-11	CARBON	180	5%	1/4W F
⚠R565	1-249-408-11	CARBON	180	5%	1/4W F
⚠R566	1-208-602-11	METAL	0.22		2W
⚠R567	1-208-602-11	METAL	0.22		2W
⚠R568	1-249-393-11	CARBON	10	5%	1/4W F
R570	1-249-419-11	CARBON	1.5K	5%	1/4W F
R571	1-249-427-11	CARBON	6.8K	5%	1/4W F
R572	1-215-867-00	METAL OXIDE	470	5%	1W F
R573	1-249-437-11	CARBON	47K	5%	1/4W
R580	1-249-429-11	CARBON	10K	5%	1/4W
R601	1-249-417-11	CARBON	1K	5%	1/4W F

Ref. No.	Part No.	Description			Remarks
R602	1-249-438-11	CARBON	56K	5%	1/4W
R603	1-249-412-11	CARBON	390	5%	1/4W F
R604	1-249-438-11	CARBON	56K	5%	1/4W
R605	1-260-103-11	CARBON	2.2K	5%	1/2W
R606	1-260-103-11	CARBON	2.2K	5%	1/2W
⚠R607	1-249-405-11	CARBON	100	5%	1/4W F
R608	1-260-099-11	CARBON	1K	5%	1/2W
R609	1-260-099-11	CARBON	1K	5%	1/2W
⚠R616	1-208-602-11	METAL	0.22		2W
R618	1-249-393-11	CARBON	10	5%	1/4W F
R621	1-249-417-11	CARBON	1K	5%	1/4W F
R622	1-249-433-11	CARBON	22K	5%	1/4W
R623	1-249-437-11	CARBON	47K	5%	1/4W
R624	1-215-867-00	METAL OXIDE	470	5%	1W F
R630	1-249-429-11	CARBON	10K	5%	1/4W
R651	1-249-417-11	CARBON	1K	5%	1/4W F
R652	1-249-438-11	CARBON	56K	5%	1/4W
R653	1-249-411-11	CARBON	330	5%	1/4W
R654	1-249-438-11	CARBON	56K	5%	1/4W
R655	1-260-103-11	CARBON	2.2K	5%	1/2W
R656	1-260-103-11	CARBON	2.2K	5%	1/2W
⚠R657	1-249-405-11	CARBON	100	5%	1/4W F
⚠R666	1-208-602-11	METAL	0.22		2W
R668	1-249-393-11	CARBON	10	5%	1/4W F
R671	1-249-417-11	CARBON	1K	5%	1/4W F
R672	1-249-433-11	CARBON	22K	5%	1/4W
R673	1-249-437-11	CARBON	47K	5%	1/4W
R701	1-249-417-11	CARBON	1K	5%	1/4W F
R702	1-249-439-11	CARBON	68K	5%	1/4W
R703	1-249-413-11	CARBON	470	5%	1/4W F
R704	1-249-439-11	CARBON	68K	5%	1/4W
R710	1-249-421-11	CARBON	2.2K	5%	1/4W F
R711	1-249-437-11	CARBON	47K	5%	1/4W
R713	1-249-414-11	CARBON	560	5%	1/4W F
⚠R714	1-249-408-11	CARBON	180	5%	1/4W F
⚠R715	1-249-408-11	CARBON	180	5%	1/4W F
⚠R716	1-208-602-11	METAL	0.22		2W
⚠R717	1-208-602-11	METAL	0.22		2W
⚠R718	1-249-393-11	CARBON	10	5%	1/4W F
R720	1-249-419-11	CARBON	1.5K	5%	1/4W F
R721	1-249-427-11	CARBON	6.8K	5%	1/4W F
R722	1-215-867-00	METAL OXIDE	470	5%	1W F
R723	1-249-437-11	CARBON	47K	5%	1/4W
R724	1-249-429-11	CARBON	10K	5%	1/4W
R725	1-249-429-11	CARBON	10K	5%	1/4W
R726	1-249-417-11	CARBON	1K	5%	1/4W F
R727	1-249-427-11	CARBON	6.8K	5%	1/4W F
R728	1-249-419-11	CARBON	1.5K	5%	1/4W F
R729	1-249-419-11	CARBON	1.5K	5%	1/4W F
R730	1-249-429-11	CARBON	10K	5%	1/4W
R732	1-249-429-11	CARBON	10K	5%	1/4W
⚠R740	1-249-393-11	CARBON	10	5%	1/4W F
⚠R741	1-249-393-11	CARBON	10	5%	1/4W F
R742	1-249-417-11	CARBON	1K	5%	1/4W F
R744	1-249-425-11	CARBON	4.7K	5%	1/4W F

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description			Remarks
R745	1-249-435-11	CARBON	33K	5%	1/4W
R751	1-249-417-11	CARBON	1K	5%	1/4W F
R752	1-249-439-11	CARBON	68K	5%	1/4W
R753	1-249-413-11	CARBON	470	5%	1/4W F
R754	1-249-439-11	CARBON	68K	5%	1/4W
R760	1-249-421-11	CARBON	2.2K	5%	1/4W F
R761	1-249-425-11	CARBON	4.7K	5%	1/4W F
R763	1-249-414-11	CARBON	560	5%	1/4W F
⚠R764	1-249-408-11	CARBON	180	5%	1/4W F
⚠R765	1-249-408-11	CARBON	180	5%	1/4W F
⚠R766	1-208-602-11	METAL	0.22		2W
⚠R767	1-208-602-11	METAL	0.22		2W
⚠R768	1-249-393-11	CARBON	10	5%	1/4W F
⚠R770	1-249-419-11	CARBON	1.5K	5%	1/4W F
R771	1-249-427-11	CARBON	6.8K	5%	1/4W F
R772	1-215-867-00	METAL OXIDE	470	5%	1W F
R773	1-249-437-11	CARBON	47K	5%	1/4W
R778	1-249-419-11	CARBON	1.5K	5%	1/4W F
R779	1-249-419-11	CARBON	1.5K	5%	1/4W F
⚠R803	1-249-389-11	CARBON	4.7	5%	1/4W F
R804	1-249-421-11	CARBON	2.2K	5%	1/4W F
R805	1-215-867-00	METAL OXIDE	470	5%	1W F
R806	1-249-436-11	CARBON	39K	5%	1/4W
R807	1-249-436-11	CARBON	39K	5%	1/4W
R823	1-249-437-11	CARBON	47K	5%	1/4W
R824	1-249-425-11	CARBON	4.7K	5%	1/4W F
		< RELAY >			
RY551	1-515-920-11	RELAY (24V)			
RY601	1-515-920-11	RELAY (24V)			
RY701	1-515-920-11	RELAY (24V)			
RY702	1-515-920-11	RELAY (24V)			
RY801	1-755-026-11	RELAY			
		< TERMINAL >			
TM701	1-694-055-11	TERMINAL BOARD (SPEAKARS)			
		< VIBRATOR >			
X301	1-579-952-11	VIBRATOR, CERAMIC 8MHz			

****

* 1-669-723-11 OUTLET BOARD (AEP,SP,AUS)
****

****

* 1-669-718-11 POWER BOARD
****

1-533-293-11 FUSE HOLDER

< CAPACITOR >

⚠C951	1-113-925-11	CERAMIC	0.01uF	20%	250V
C952	1-137-372-11	FILM	0.022uF	5%	50V
C953	1-126-942-61	ELECT	1000uF	20%	25V
C954	1-126-964-11	ELECT	10uF	20%	50V
C955	1-126-964-11	ELECT	10uF	20%	50V

Ref. No.	Part No.	Description			Remarks
		< CONNECTOR >			
CN904	1-564-321-00	PIN, CONNECTOR 2P (AEP,SP,AUS)			
CN905	1-564-321-00	PIN, CONNECTOR 2P			
⚠CN906	1-540-042-11	OUTLET, AC (NONPOLAR) (3P)(E)			
* CN907	1-568-824-11	SOCKET, CONNECTOR 5P			
CN909	1-564-321-00	PIN, CONNECTOR 2P (AEP,SP,AUS)			
* CN911	1-564-687-11	PIN, CONNECTOR 3P (E)			
		< DIODE >			
D951	8-719-024-99	DIODE 11ES2-NTA2B			
D952	8-719-024-99	DIODE 11ES2-NTA2B			
D953	8-719-024-99	DIODE 11ES2-NTA2B			
D954	8-719-024-99	DIODE 11ES2-NTA2B			
D955	8-719-911-19	DIODE 1SS119			
D956	8-719-985-95	DIODE HZS7A2LTA			
		< FUSE >			
⚠F903	1-532-502-31	FUSE TIME LAG 1.25A (AEP,SP,AUS)			
		< TRANSISTOR >			
Q901	8-729-119-78	TRANSISTOR 2SC403SP-51			
Q902	8-729-026-68	TRANSISTOR 2SD2525(TP)			
		< RESISTOR >			
R951	1-249-421-11	CARBON	2.2K	5%	1/4W F
R952	1-249-425-11	CARBON	4.7K	5%	1/4W F
R953	1-249-437-11	CARBON	47K	5%	1/4W
		< RELAY >			
⚠RY951	1-755-018-11	RELAY			
		< SWITCH >			
⚠S902	1-571-309-11	SWITCH (VOLTAGE SELECTOR)(E)			
		< TRANSFORMER >			
⚠T902	1-450-358-11	TRANSFORMER, POWER			

****

* 1-669-716-11 REAR SP BOARD
****

< CONNECTOR >

CN103 1-770-725-11 CONNECTOR, BOARD TO BOARD 4P

< TERMINAL >

TM601 1-537-240-11 TERMINAL BOARD(CHECKER PIN) (REAR SPEAKERS)

****

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Replace only with part number specified.

SW **TRANS 1** **TRANS 2** **VOL**

Ref. No.	Part No.	Description	Remarks
*	1-670-206-11	SW BOARD ********	
		< CONNECTOR >	
CN407	1-568-668-11	CONNECTOR, BOARD TO BOARD 6P	
		< SWITCH >	
S401	1-554-118-00	SWITCH, PUSH (1 KEY)(POWER)	
**********			
*	1-669-719-11	TRANS 1 BOARD **********	
	1-533-293-11	FUSE HOLDER	
		< FUSE >	
⚠F901	1-532-464-31	FUSE TIME LAG 2.5A (AEP,SP,AUS)	
⚠F901	1-532-504-31	FUSE TIME LAG 4A (E)	
⚠F902	1-532-388-31	FUSE TIME LAG 2A (E)	
**********			
*	1-669-720-11	TRANS 2 BOARD **********	
	1-533-293-11	FUSE HOLDER	
		< CAPACITOR >	
C817	1-136-165-00	FILM 0.1uF 5% 50V	
		< CONNECTOR >	
* CN902	1-691-774-11	PLUG (MICRO CONNECTOR) 12P	
		< FUSE >	
⚠F801	1-532-505-31	FUSE TIME LAG 5A	
⚠F802	1-532-505-31	FUSE TIME LAG 5A	
		< RESISTOR >	
⚠R810	1-217-637-00	FUSIBLE 1 5% 1/4W F	
⚠R811	1-217-637-00	FUSIBLE 1 5% 1/4W F	
**********			
*	1-669-721-11	VOL BOARD *********	
		< CONNECTOR >	
CN404	1-750-185-11	CONNECTOR, BOARD TO BOARD 4P	
		< VARIABLE RESISTOR >	
RV401	1-473-392-11	ENCODER, ROTARY (MASTER VOLUME)	
**********			

Ref. No.	Part No.	Description	Remarks
		MISCELLANEOUS **********	
14	1-769-867-11	WIRE (FLAT TYPE) (5 CORE)	
16	1-773-217-11	WIRE (FLAT TYPE) (25 CORE)	
⚠59	1-526-794-11	OUTLET, AC (AEP,SP,AUS)	
* 62	1-669-723-11	OUTLET BOARD (CNJ901) (AEP,SP,AUS)	
⚠63	1-575-651-11	CORD, POWER (AEP,SP)	
⚠63	1-575-653-11	CORD, POWER (E)	
⚠63	1-690-608-11	CORD, POWER (AUS)	
⚠64	1-569-007-11	ADAPTOR, CONVERSION 2P (E)	
⚠T901	1-431-857-11	TRANSFORMER, POWER (AEP,SP,AUS)	
⚠T901	1-431-858-11	TRANSFORMER, POWER (E)	
**********			
		ACCESSORIES & PACKING MATERIALS **********	
	1-475-747-11	REMOTE COMMANDER (RM-U581)	
	3-810-504-31	MANUAL, INSTRUCTION (ENGLISH,FRENCH,SPANISH,PORTUGUESE)(AEP)	
	3-810-504-41	MANUAL, INSTRUCTION (GERMAN,DUTCH,SWEDISH,ITALIAN)(AEP)	
	3-862-620-11	MANUAL, INSTRUCTION (ENGLISH,FRENCH,SPANISH)	
	3-862-620-21	MANUAL, INSTRUCTION (GERMAN,PORTUGUESE,DUTCH,SWEDISH,ITALIAN)(AEP)	
	3-862-620-31	MANUAL, INSTRUCTION (CHINESE,ARABIC) (E,SP)	
	4-981-643-01	BATTERY COVER (FOR RM-U581)	
**********			
		********** HARDWARE LIST **********	
#1	7-685-646-79	SCREW +BVTP 3 × 8 TYPE2 TT(B)	
#2	7-685-650-91	SCREW +BVTP 3 × 16 TYPE2 TT(B)	
#3	7-685-646-01	SCREW +BVTP 3 × 8 TYPE1	
#4	7-623-954-01	WASHER (FIBER)	

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